

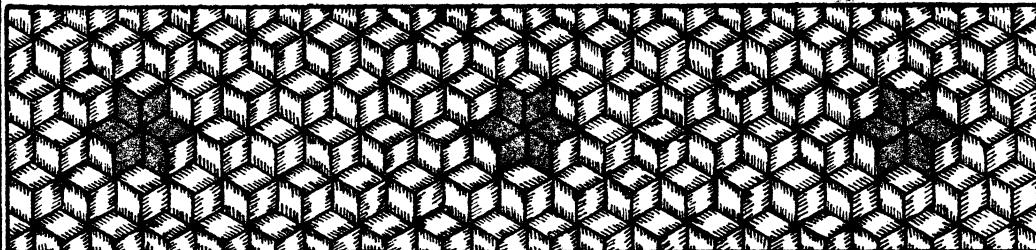
THE PHILIPPINE CRAFTSMAN

SEPTEMBER, 1913

A MAGAZINE PUBLISHED
AT MANILA BY THE BUREAU
OF EDUCATION. DEVOTED TO THE
ADVANCEMENT OF INDUSTRIAL
INSTRUCTION IN THE PUBLIC
SCHOOLS OF THE PHILIPPINES

Vol. II

NO. 3





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The Philippine Craftsman

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MANILA, SEPTEMBER, 1913

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The Philippine Craftsman is published by the Bureau of Education at Manila, P. I., monthly during nine months of the school year from July to March. The subscription price is ₱3 per year or ₩0.60 per copy, postage prepaid in the Philippines, the United States, and other countries under the same postal regulations; to countries not counted in this classification, ₩4 per year or ₩0.70 per copy. (₱1 equals \$0.50.) Address correspondence and make subscriptions payable to the Director of Education, Manila, P. I.

Entered at the Manila post office as second-class matter.

We ascribe beauty to that which is simple; which has no superfluous parts; which exactly answers its end; which is related to all things; which is the mean of many extremes. Things may be pretty, rich, graceful, handsome, and still lack beauty.

—G. Baldwin Brown.

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HISTORIC ORNAMENT WITH APPLICATION TO DECORATIVE DESIGN IN THE PHILIPPINES.

By SUSAN C. JOHNSON, General Office, Bureau of Education.



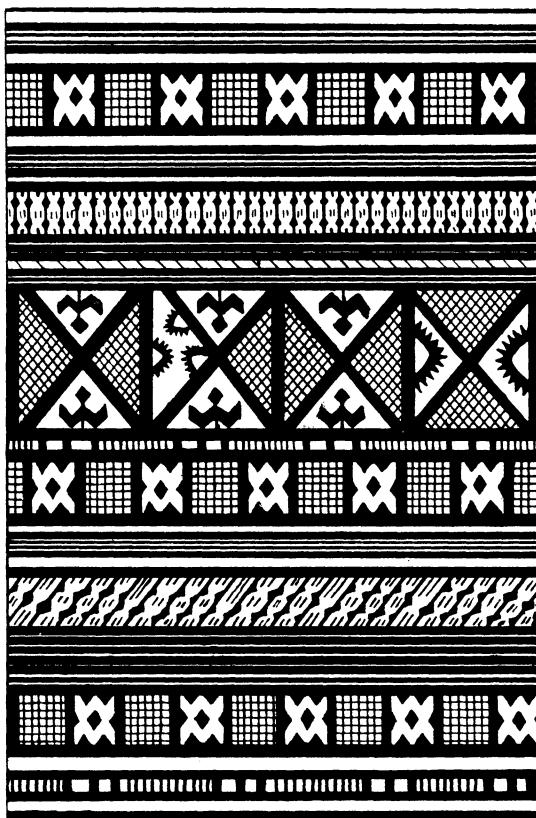
RT has its beginning in the impenetrable mist of prehistoric times and, as civilization develops, its growth spreads through all ages and all nations, the style of each period and the distinctive features of each nation being marked by the ideas and characteristics of that age and nation.

The desire for decoration preceded the desire for clothing. A body covering, in the form of tattooing, however, was probably the earliest type of applied ornament, the savage realizing that through this means he was able to produce certain desirable facial expressions and to emphasize muscular contour. Subsequently, the practice assumed religious and social significance which varied with the country and according to the age at which it was performed. Struck with what, to him, was the beauty of the result, the savage soon extended surface decoration, by way of analogous processes, to burning on wood, scratching lines and dots on stone and wood, painting in red and black upon light surfaces, stamping on cloth, and, later, to the weaving of more complex designs. Some of the most beautiful examples of surface decoration to be found are among those of savage people.

Next followed designs in relief; the carving of human heads to serve as idols and fetishes and the decoration of weapons of defense and the chase and domestic implements, until an elaborate system of etching and incising was developed.

NOTE.—The following publications have been referred to for notes and illustrations upon historic ornament: Grammar of Ornament, by Owen Jones; A Handbook of Ornament, by F. S. Meyer; Decorative Design, by Paul N. Hasluck; International Library of Technology. Notes and illustrations of Philippine ornament have been obtained through the reports of several members of the Bureau of Education in addition to information gained through the personal research of the writer.

When any event worthy of record took place, men pictured it rudely but truthfully by scratching it upon bone, or by painting or carving it upon stone or wood. Each age had its share of these representations of actual fact, and our painting and sculpture to-day is an outgrowth of this primitive picture drawing. Later, as life became more complex, the need for indicating ideas as well as facts gave rise to the use of symbolic forms and



Surface decoration from savage tribe.

their combination into pictures conveying specific ideas, or ideographs as they may be termed. In this way a conventional system of picture symbols gradually developed.

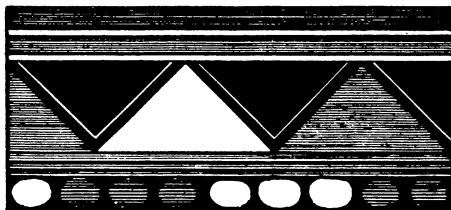
In all ages and all quarters of the world distinguishing symbols have been adopted by tribes or nations, by families or by chieftains. Savage ornament abounds in such symbolism, and the use of the same symbols in most divergent regions, to represent similar ideas, gives weight to the theory that there was one

locality where civilization originated and from which it sent forth its successive waves of culture. To this primeval society may be traced

the origin of the so-called "Greek fret" and the swastika, or Aryan sun symbol. The one was probably produced by the repetition of a modified form of the other and both have become well-nigh universal.

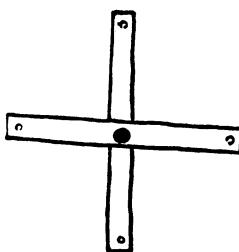
The birthplace and the original significance of the swastika have long been fascinating and tantalizing subjects of study for

students of art and religion. The theory that it was developed from the earliest form of the cross—the pieces of which having become separated were juxtaposed in fret form—seems quite acceptable. The cross itself in its simplest form—two



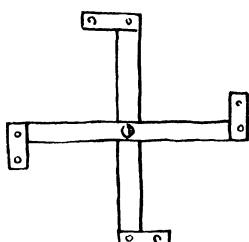
Ornaments from Mexican pottery.

pieces of wood fastened at a central intersection—was a part of the mechanical device by which fire was created,¹ a feature of the morning rite of sun worship. Its wide distribution, extending to nearly every country, is remarkable. It was a religious emblem in India and China ten centuries before the Christian era, and it has been found in the Catacombs of Rome and in ancient Troy, recording the period of 1300 B. C. It appears upon woven and metal articles devised by the American Indians and is a feature in the ornament of Japan, Korea, Thibet, Austria, Germany, Switzerland, Scandinavia, and the countries of Malaysia. However the theories regarding its significance vary in particulars, it is generally understood that it was a symbolic representation of a solar god or of the sun in motion. To this mysticism may be attributed its present-day use as a good-luck

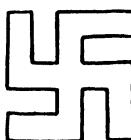


Simple cross.

¹ See "Records of the Past," Vol. VI.



Swastika.

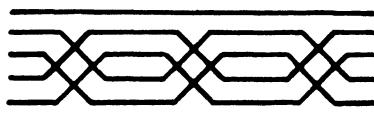


charm and this carries us back to the ancient religious rite of sun worship.

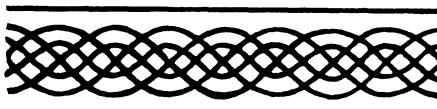
The fret in one shape or another is to be found among the first attempts of ornament of every savage tribe. It decorates

the cups, vases, and implements of both the cliff dwellers of America and the inhabitants of the Himalayan Mountains. Yucatan shows it in the later pure Greek form and also with the elements united by slant lines instead of vertical ones, and frets of similar form and proportion are found in Mexico and in Arabia. A more complicated form in given mathematical proportions belongs to the period which marks the climax of Greek art, the original of which may have been suggested to the Greeks by examples seen in early Egyptian ornament and developed by them into the well-known meander.

This early desire among primitive people to decorate, and their taste for ornament are worthy of attention. The efforts of people in early stages of civilization compared with those of



Moresque fret.



Celtic fret.

later periods, are as the efforts of children compared with those of persons of mature mind. The one shows a grace, naïveté, and spontaneity never shown in

the other. In the same way the productions of the earliest masters lack the charm and power shown in those of a later period, but surpass them in grace and truth.

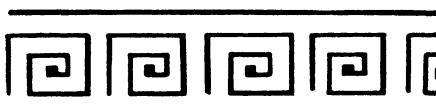
The pleasure with which we view the works of savage tribes is generally due to our appreciation of the genius with which a difficulty has been overcome and of the simple truth with which an evident intention has been worked out. It is



Fret from Yucatan.

this evidence of individual thought which gives value to every work of art, humble or pretentious.

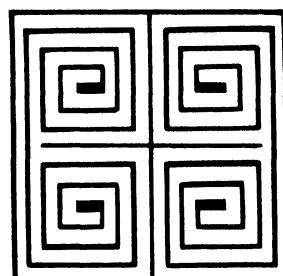
The decoration of all savage people is marked by a strength gained through the simple truth with which it renders ornamenteally concrete forms taken from natural environment and through the symbolic representation of abstract ideas. To these may be added a limited number only of geometric forms. The types, however, though few in number, appear in such a wonderful variety of modifications that the observer never feels a poverty of motif, but becomes fascinated in tracing the same form throughout many designs, its identity hidden, perhaps, by some new arrangement of color or by its being rendered in a different medium. There is also little variety in color, the three primaries, blue, red, and yellow—the secondary



Chinese fret.

green to a lesser extent—with black, white, and brown, appearing to be sufficient for all color schemes. We also find that the art of the savage nearly always maintains a true balance of form and color. Nature being his one source of suggestion, his eye is accustomed only to her harmonies.

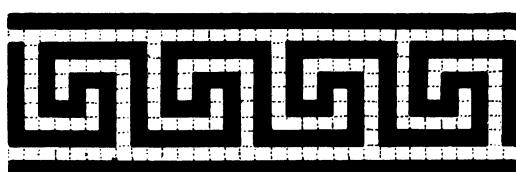
The qualities which mark the art of a primitive people and the influence of the religious and secular life of a nation upon its art, are nowhere more pronounced than in the decoration of the Egyptians. Emerging as it does from a period antedating the Christian era by thousands of years, its principles are primal. The more ancient the example, the more beautiful it is. It gives no evidence of the influence of any other people, and it is the parent of the Greek, Roman, and Byzantine from which the Arabian, Moresque, and Gothic



Fret from Yucatan.



Arabian fret.

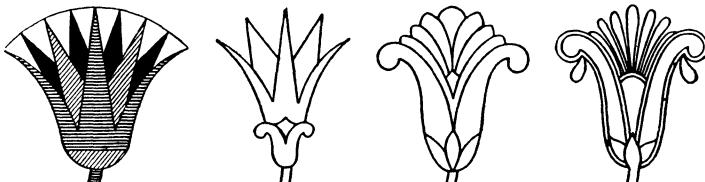


Greek fret.



Lotus flower.

are offshoots. Ancient Egyptian art gives evidence of a civilization equal in certain phases to that of the present era and it is surpassed only by its own earlier periods up to the time of decline



Conventionalized lotus.

through Greek influence. Egyptian style is the most perfect, as the ideas and teachings which it conveys are soundest, though they may seem foreign and peculiar to us.

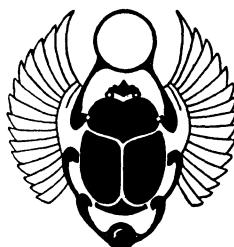
The types of ornament which appear are few and natural, and conventional forms of the same objects repeated from age to age, however highly conventionalized, are always true. The lotus and papyrus, growing on the banks of the sacred river, symbolized food for the body and mind. Feathers of rare birds, emblems of sovereignty, and the palm branch with the twisted cord made from its stems, are a few types recurring in all classes of ornament. Here again, as in savage ornament, the marvelous variety of representation in which the same types appear without decrease in value is notable. The lotus flower, for example, may decorate the capital of a



Conventionalized lotus.

stone column, the carved insignia of a king, gold and enameled vases, the rudder of a boat, the walls of a temple or tomb, a mummy case, a hand mirror, a fan, or the dress of an image of a god, and show perfect fitness in all of the applications.

A large proportion of Egyptian ornament is exclusively concerned with pictorial representations of the religious ceremonies and symbols of mystic rites of the Egyptians. Kings, whom they deified, quaint representations of their gods, their sacred animals and plants, appear in all forms of ornament. By continued formal repetition they became purely conventional decoration, but each had its original significance conveying some mystic import. The lotus, food for the body, signified eternal youth; the scarab, or sacred beetle, symbolized



Scarabaeus.

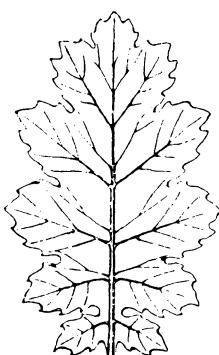


Winged sphinx.

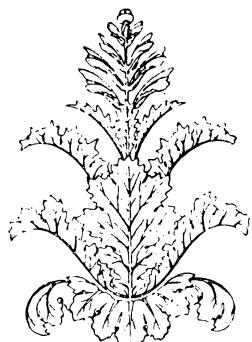
long life on earth and in the after world. It preserved from death, while the frog was the emblem of renewed life. The serpent symbolized eternity and the egg typified life. The two are generally shown in combination. The human figure with hands outstretched was symbolic of devotion. It is recorded that the god of speech and wisdom ordered this symbol placed over the door of every house.

The very decorative form of these symbols has contributed to their preservation through the ages and to their present-day application in modern decoration. These still suggest the Egyptian, even though some of the symbols, and the lotus and papyrus, play an important part in the social life of the Assyrians, Hindus, and other nations.

The art of Egypt can be traced into Asia Minor through Assyria, whose style was borrowed from the former country. The weakening effect of such a procedure is evident, for Assyrian art rates much below



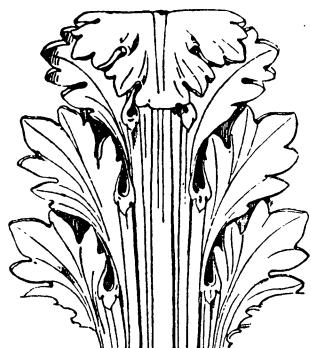
Natural akanthos.



Natural akanthos.

religious people, were not dominated by religious superstitions and their arts were not bound or restricted by the embodiment of religious ideas into all forms of expression, as were those of the Egyptians. Greek ornament developed along an entirely different line. It was almost without symbolism and representative in but a small measure, a purely decorative quality being its chief and, in the later periods, its sole purpose.

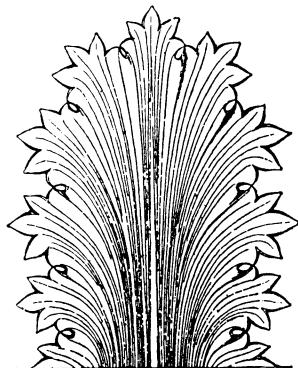
Religious subjects, such as those which form an ornamental frieze running around the Parthenon, and of which fragments may be seen in the British museum, are sometimes represented. In the minor arts the wave ornament and the fret, used to distinguish land from water, and a few conventional renderings of trees are about the only examples of representative ornament which deserve the name. Among the latter we find the olive, symbolic of peace; and the laurel, symbolizing atonement.



Conventionalized akanthos (Roman).

the standard of that of Egypt. Except for the pineapple, sacred to Assyria, and the borrowed lotus her ornament is not based upon natural types. Natural laws are violated and Assyrian art is really more borrowed or bound by tradition than instinctive with the people.

Greek art, though borrowed partly from the Egyptian and partly from the Assyrian, was the development of an old idea in a new direction, these foreign influences being entirely subordinate to Greek feeling. The Greeks, though a



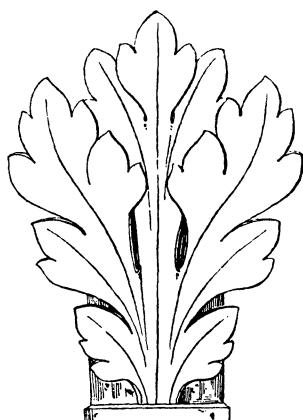
Conventionalized akanthos (Greek).

A characteristic example of purely decorative ornament is the akanthos leaf, the most popular of all ornamental designs taken from plants. Introduced by the Greeks, it recurs again and again in every western style. Such types are few, but the conventional rendering is much fur-

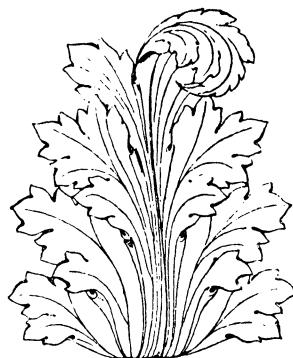
ther removed from the type than is customary with the Egyptians. In the well-known "honeysuckle" border it is so difficult to recognize any natural form that the question arises as to whether its likeness was discovered after its completion through an abstract process, or whether the flower served as a model. Its source has also been attributed to the palm leaf and it is sometimes called the Greek lily.

Another characteristic form met throughout Greek ornament is the anthemion, the origin of which is traceable to the Egyptian lotus. A combination of the anthemion, or palmette form, and the honeysuckle presents a design commonly recognized as Greek. The scroll, which appears with great frequency in Greek surface ornament, is still another pattern considered to be borrowed from Egypt. Although it has lost all of its symbolic character, it has increased in art value, showing as it does an improved refinement in proportion and lines. These several types appear in great variety and beauty upon Greek vases.

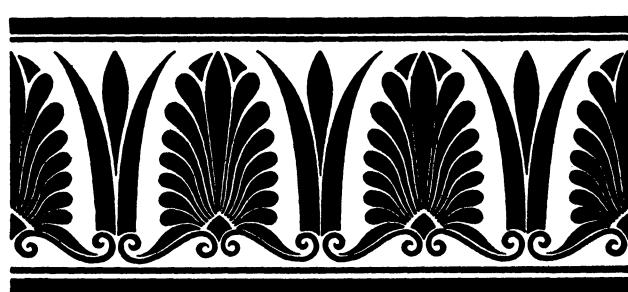
A comparison of Greek and Egyptian art presents a distinct contrast which reflects the characteristics of the two peoples. The religion of the Greeks was conducive to happy and beautiful ideas, while that of the Egyptians was suggestive of gloom.



Conventionalized acanthos
(Gothic).

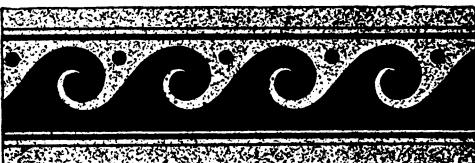


Conventionalized acanthos
(Roman).

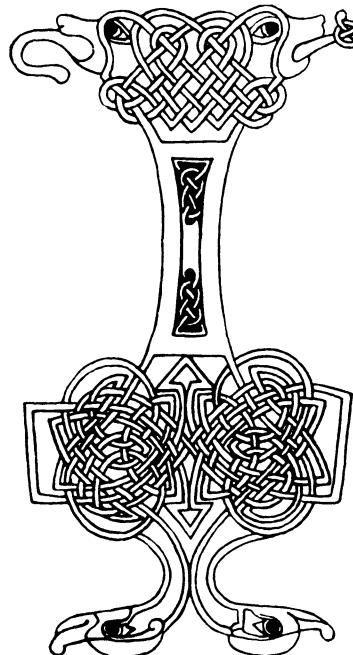


Honeysuckle and anthemion.

and foreboding. The Greeks were bold, free, and progressive in spirit, highly developed intellectually, and good taste and skill in the execution of ideas seemed to be universally possessed.



Scroll pattern (Greek).



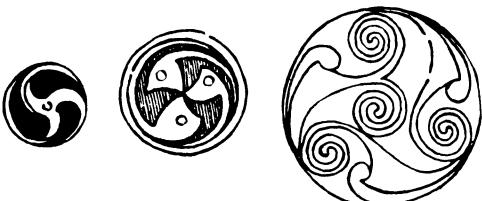
Celtic ornament, grotesque and laced.

It is not surprising, considering the forces which directed the development of the two nations, that the Egyptians should produce an art which was characterized by a massive grandeur and simple truth, while that of the Greeks expressed perfection of symmetry and proportion and a graceful strength which pervaded the art of all subsequent nations.

Through the period of Pompeian art the Greek merges into that of the Romans, whose art shows a marked contrast in style and whose part in historic ornament is a comparatively uninteresting one. As their religion was a borrowed one in which they had little faith, so their ornament was borrowed and insincere and became a debasement of pure Greek style. The Romans gave us an improved form of the *akanthos*, but also combined the Ionic and Corinthian columns into a new order which lacked the beauty

gained through the chaste and reposeful style of the Greek order. Roman art, reflecting the Roman character, was extravagant and bombastic and sacrificed beauty to display.

Early Italian art was strongly influenced by the Etruscans, a people of inherent artistic feeling. The Roman



Trumpet pattern.

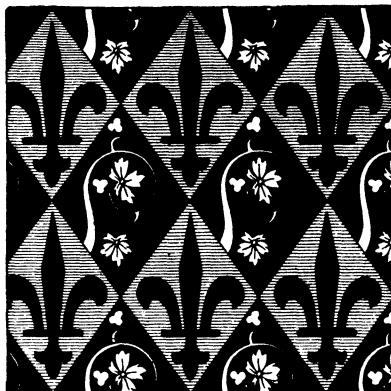
arch, which in architecture took the place of the Greek lintel, came through Etruria, whose influence is again evident in the Grotesque style which is a feature of the Gothic and the Renaissance periods.

The Grotesque, in conjunction with the wonderful interlaced work, forms too a distinctive element of Celtic art which, though it had its birth and reached its most perfect development in Ireland, is also the style found in Scotland, the north of England, and the Isle of Man.

The most characteristic of all Celtic patterns is that produced by two or three spiral lines starting at a fixed point with their opposite extremities going off to centers of coils formed by other special lines. This pattern has been called the trumpet pattern, because the space between any two adjacent lines forms a long curved design like an ancient Irish trumpet.

As we proceed with historic ornament, the characteristics of different nations may be grouped by periods during which certain general styles prevail, and though special types are still recognized as belonging to the work of certain nations, they play a less distinctive part than the types associated with nations of the earlier eras.

The Romanesque period, following the fall of the western Roman Empire, was a formative one during which the influence of the uprising nations of Europe was at work, adapting the principles of Roman art to their own needs and ideas. This modified Roman style was succeeded in western Europe by the Gothic and in the East by the Byzantine. It is with the latter that we are more directly concerned because of its influence upon Asiatic art, but, before leaving Europe, heraldry and armorial bearings, with which the middle ages are replete, should be considered, because of their large employment of symbolic devices in decoration.



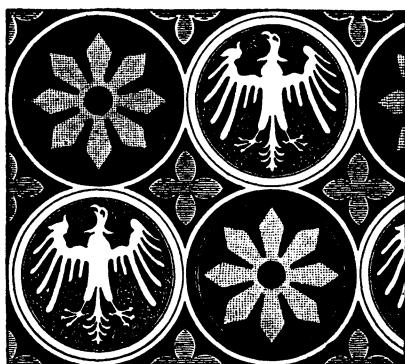
Fleur-de-lis, French Gothic.



Lion, rampant.



Lion, passant.



Eagle in German Gothic ornament.

Although heraldry was not formally established until the twelfth century, we have examples of it at a much earlier period. The totem of the American Indians was closely related in meaning and origin to the escutcheon in chivalry, and evidences of heraldry are seen in Egyptian art, where we find the sun disk flanked by two serpents, symbolic of upper and lower Egypt.

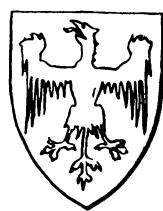
Perhaps no type which had its origin in heraldry became more popular than the fleur-de-lis, emblematic of France because Hugh Capet, the first French king, carried it on his shield as the insignia of his family.

Not only is the lion represented in heraldry, but it appears as symbolic of different ideas from the earliest Egyptian art through ancient, medieval, and modern periods until the present day. Next to the lion, the eagle figures more largely than any other animal form. It also appears in decorative arts since prehistoric times, is prominent in Egyptian, Assyrian, and Persian ornament, and is represented by the Greeks as the companion of Zeus. The eagle on the new banner of Mexico may be traced to the eagle once carved over the door of the palace of Montezuma, and it is claimed to-day by the United States, Austria, Germany, Prussia, and France.

The eagle with one neck and two heads was a Byzantine invention. It did not appear as an imperial seal, however, until after 1414, when it became the recognized arms of the king of Rome. Ivan the Great later took for his cognizance the double-headed eagle. In heraldry the Grotesque style in Celtic art again appears as the triquetra, the arms of the Isle of Man.



Eagle, double-headed.



Eagle, displayed.

The qualities attributed to the dragon being protective and terror-imposing, and its effigy being highly decorative, it is but natural that it should appear early in decorative art and take a place in heraldry. The Romans borrowed it from the conquered Dacians, and it became the emblem

of the cohort as the eagle was the insignia of the legion. It is the national symbol of China and the badge of the imperial family and, as such, plays a large part in Chinese art. Chinese and Japanese dragons, though regarded as powers of the air, are wingless. They are the deified forces of nature of the Taoist religion, and the shrines of dragon kings who dwell partly in water and partly on land are set along the banks of streams.

The crest of the imperial family of Japan bears the golden chrysanthemum. Other persons may use it, providing it is represented with any number of petals other than sixteen, the number reserved for the flower when used in royal insignia. A similar restriction is applied to the Chinese dragon, which must have just five claws when used as the national emblem. The badges worn by some of the noble classes of Japan are akin to the heraldry of the West and the circle inclosing three asarum leaves of the Tokugawa shoguns is as familiar in Japanese lacquer and porcelain as the red pellets of the Medici in old Italian fabrics.



Dragon.



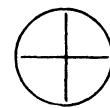
Triquetra.

A similar restriction is applied to the Chinese dragon, which must have just five claws when used as the national emblem. The badges worn by some of the noble classes of Japan are akin to the heraldry of the West and the circle inclosing three asarum leaves of the Tokugawa shoguns is as familiar in Japanese lacquer and porcelain as the red pellets of the Medici in old Italian fabrics.

Among symbols significant of religious ideas we have the prehistoric symbol of God, a circle inclosing a cross. The Egyptians, in the winged sun, retain the circle and add to it the outstretched wings indicative of sovereignty and ubiquity of the deity, and therefore the triumph of right over wrong. (See back cover design.) Later we have the circle appearing again in the nimbus or halo, the Christian symbol of glory. Other familiar symbols of Christianity are the several forms of the cross and the monogram of Christ, composed of the two Greek letters of his name with the alpha and omega added to signify his eternal character. Besides the use of symbolic ideas in simple form we find the more complex representations in the combination of parts of different effigies to express the several attributes of each. For example, the dragon with the body of a serpent and the head of a carnivorous bird, expresses the treachery of the snake with the cruelty and passion of the vulture. The sphinx of Egypt and the centaur and mermaid of classic art belong to this class of symbolic representation.



Monogram of Christ.

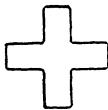


Emblem of Deity.

Byzantine art was evolved from a mass of styles belonging to the surrounding nations and fused



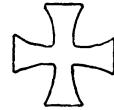
Latin cross.



Greek cross.



Cross of St. Andrew.



Maltese cross.

into a systematic whole, the principles of which in turn influenced the art of all the East, and of eastern Europe from the eleventh to the sixteenth century. Byzantine style was largely Romanesque, with a strong oriental influence, and during its transition from the Roman, which was very gradual, it is difficult to distinguish any definite style. The great church of Hagia Sofia gives us the first purely Byzantine monument.

Persian style, which contributed to the Byzantine, was itself a mixed style and never reached a perfection equal to that of



Kufic and Arabesque; Moorish ornament.

"There is no conqueror but God."

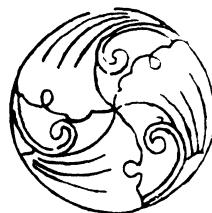
other Mohammedan countries. At its period of greatest splendor it was generally a conception of the Arabian modified by the Indian and the peculiar genius of the race.

The Persians gave great attention to the various crafts and are famous for their ornamentation of manuscript, the rug work with which we are all familiar, and the glazed tile work. Specimens of the latter from the palace of Darius at Susa are as old as 485 B. C., and many are examples of great beauty and are sought by European manufacturers for copy.



Indian ornament.

Although the influence of Byzantine and Arabian style was mutual in earlier periods, at a later date the Arabians, unlike the Persians, developed a perfect style of their own under the spread of Mohammedanism. This religion forbids the use of the human figure or of any animal or vegetable form as an element of design. Accordingly, geometric decoration is the leading feature of Arabic and of Moorish art. Figures are formed by the crossing and interlacing of lines, and surfaces are entirely covered. This laced style is quite different in appearance from that of the Celts. In the pure Arabic the flower is never to be found, but other



Japanese flower ornament.

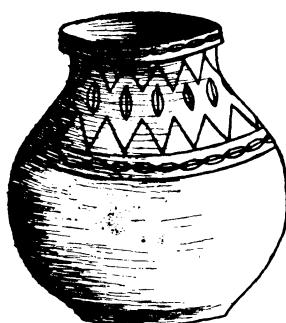


Renaissance ornament.

forms resembling it and apparently inspired by nature are common. One other distinctive feature of Arabic style is the employment of decorative writing. The Kufic, invented for the inscription of the Koran, was both beautiful and sacred.

A combination of these two types of ornament adorned the Alhambra and the walls of Arabian palaces and mosques.

The art of India began in the mysteries of the age described in the sacred writings of the Hindus, a thousand years or more before Christ, and it has retained to this day its essentially religious character and meaning. India exchanged ideas in art with Egypt and Assyria; the Buddhist faith was intro-



Water jar, Tarlac.



Clay pipe, Antique.

reproduced every new idea with a distinct Hindu stamp which bears all traces of originality.

The present influence of Europe on Indian art is disastrous. Commonplace designs and cheap, bad processes of production are resulting from the competition of machine work and the invasion of the tourist with uncultivated taste, thus creating a demand for quantity at the sacrifice of quality.

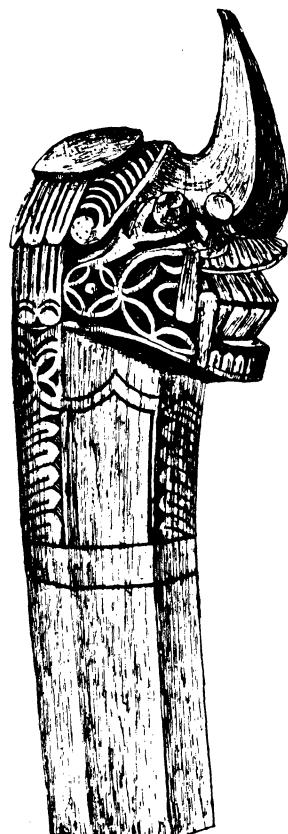
The old native princes gave direct protection and encouragement to craftsmen who strove to produce the best work possible. With this system India came to excel in almost every branch of decorative arts and crafts. She is famous for metal work and raised embroidery, being excelled only by Spain and Persia in the former.

Everywhere in their art we find the gods and the symbols which represent them; beasts dedicated to the gods, of which the cow is most highly revered; sacred trees and sacred mountains. Among animals the serpent, and among birds, the peacock, are perhaps the most widely found, as they lend themselves best to artistic representation. The elephant which supports the world, the tortoise on which the elephant stands, and dogs which also occur in the ancient mythology are favorites.

There is no better way of realizing the influence of religion upon the decorative art of a country than by contrasting the ornament used by the nations dominated by Mohammedanism with that used by the Hindus.

A comparison between the art of India and that of Japan again presents

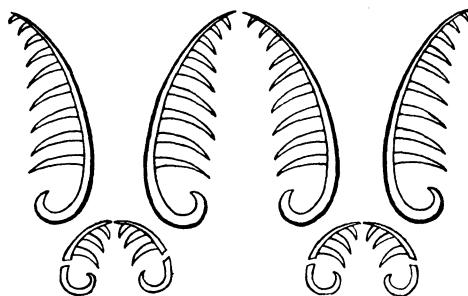
duced in the sixth century B. C.; Mohammedanism spread to India in its great wave of progress; and since the beginning of the Christian era western influences have come in. Through all of these changes, however, the art of the Hindus has taken to itself and absorbed each new influence and has



Bolo handle, Capiz.

an example of the marked influence of religion upon art. Though decorative art probably came into Japan with Buddhism, it is given a brighter, more homely, and much less ascetic interpretation there than in India.

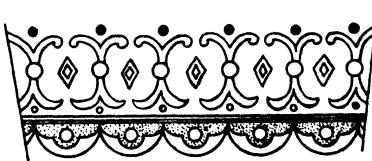
The Japanese as a people are great lovers of beauty and the peculiar touch and feeling with which they present natural forms—flowers, trees, animals, insects, and little scenes from daily life—are unexcelled. In this they have far surpassed China, their parent in art. Certain types of ornament, as the iris, bamboo, cherry blossoms, and the stork (emblem of longevity), have been so thoroughly exploited that further mention of them is needless.



Units in palm design from the Visayas.

oped by the conquering races. This flourished feebly in Italy, as the original Romans at home protested against it and endeavored to adhere to their ancient traditions and styles of art. This they were more easily able to accomplish, as they had their old Roman buildings, many of them still intact, which offered examples for copy.

The unfortunate circumstance here was that the source of classic art, ancient Greece, was closed to the world, the Turks being in possession of Athens, and so Roman art, itself a copy and debasement of the classic, became the parent of a hybrid Roman style known as early Renaissance. Little of the antique was brought to light in the fourteenth and fifteenth centuries, although the minds of men were fascinated by classic grace and science. Gradually the early Christian



Design in carved wood from the Visayas.

No certain date can be set at which ancient classic art died out or at which it was revived after the medieval period. Following the conquest of Rome by the barbarous tribes of the North, a new style of architecture, later termed the Gothic, was developed by the conquering races. This flourished feebly in Italy, as the original Romans at home protested against it and endeavored to adhere to their ancient traditions and styles of art. This they were more easily able to accomplish, as they had their old Roman buildings, many of them still intact, which offered examples for copy.



Shield from Bukidnon, Occidental Negros.



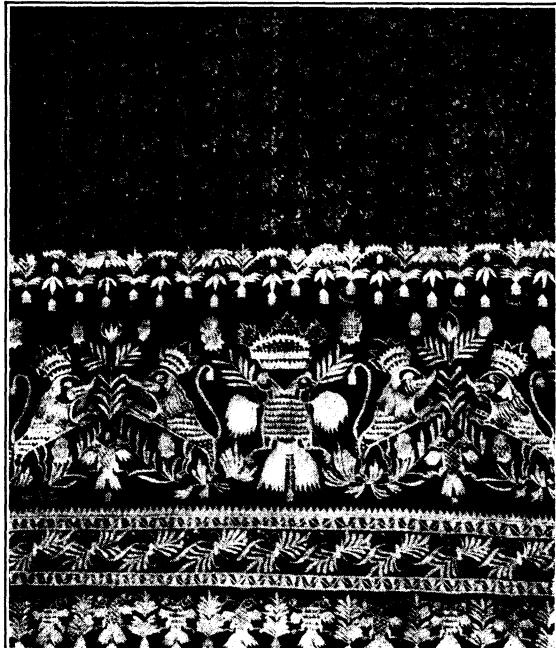
Butterfly motif upon cloth from Laoag,
Ilocos Norte.

motives yielded to pagan subjects and this pseudo-classic style pervaded the whole of Europe for two centuries.

The works of the masters of this period, Michaelangelo, Raphael, Titian, and the others, were not so much studies of antiquity as of modern genius inspired by the ideals of the past.

Through this wholesale copying from classic ornament and from nature in a

too servile manner, and through the adaptation of the expressions of paganism to Christian art, a style developed which was characterized by an exaggeration and incongruity of design where dignity was often lost in the frivolity of the detail. Animals whose tails end in a flower form, birds springing out of geometric forms, the human form and heads treated in both



Blanket from Miagao, Iloilo.

natural and grotesque style and combined with animals, flowers, and geometric shapes, may all be found in the same piece of decoration.

Ornament of this period seems to have lost all boundaries and run riot while reveling in freedom from medieval restraint, all of which again was an expression of the social conditions of the period.

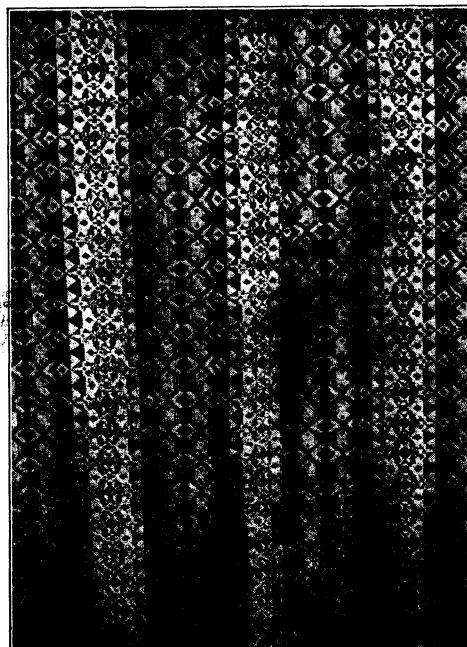
Owing to its extensive proportions it is quite impossible to set forth historic ornament with any complete degree even in a book of moderate size, much less in an article of this length. Therefore, a skeleton outline only has been presented with the purpose of

emphasizing the fact that the style of ornament used in decoration is distinctive with each nation, and also to show how large a part symbolism plays in decorative design. Even though within a certain period several nations may give evidence of the same general tendencies of style, still each will show its own peculiar interpretation of the principles of that period of art.

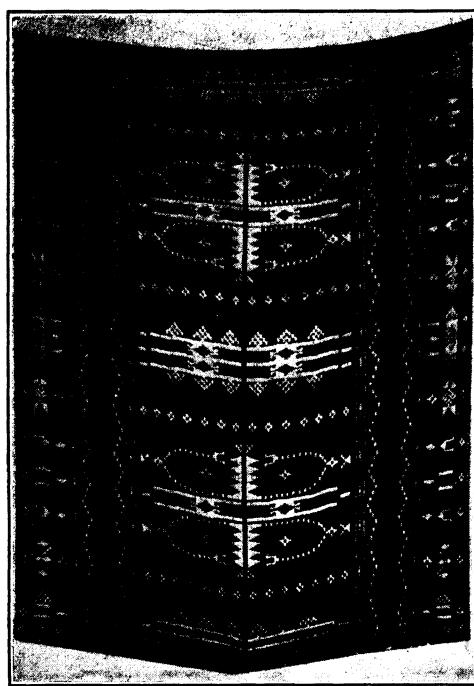
Historic ornament is not to be studied with a view to collecting a number of designs which may be applied to our



Blanket from Miagao, Iloilo.



"Snake" pattern. Blanket from Miagao, Iloilo.



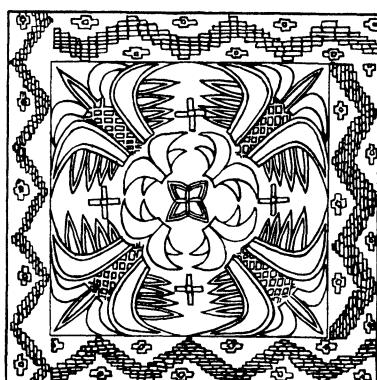
Dupax blanket from Nueva Vizcaya.

antique, form finds its clearest and most beautiful expression; and furthermore, that primitive art, being a natural instinct and so, always true to its purpose, usually shows refined taste and skill. In the light of the foregoing facts we must conclude that in the study of design, historic ornament is equally important with the principles of design. In the work of encouraging and improving the crafts of the Philippines it is requisite that due consideration be given to the decoration and the technic of the minor arts of Malausia.

As civilization proceeds, native craft is supplanted by the cheap commercial articles offered, and native art becomes debased through a too hasty assimilation and a misapplication of new ideas. So, what-

own use, but rather for building up a background from the knowledge of principles and styles which have marked earlier periods, the influences which created them, and the effects of certain policies and procedures upon style. Such a background should give us an understanding through which we may interpret new conditions rationally and in a spirit of full appreciation.

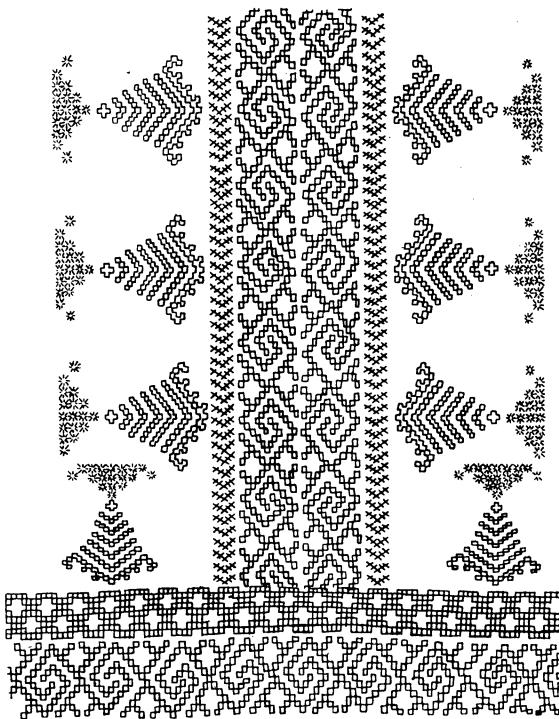
History of art shows that wherever a nation has copied the art of another nation the result is inferiority and decadence; that in the



Motif in design upon a cloth bag from Cagayan, Misamis.

ever is good in aboriginal work will undoubtedly be lost if nothing is done to preserve it. The basketry of the North American Indians represents a pertinent example. This craft, offering as it does some of the most beautiful specimens of the art of a primitive people, is disappearing in undue proportion to the decadence of the race, and might now be considered as almost lost, were it not for such work of preservation as that done by Otis T. Mason and George Wharton James.

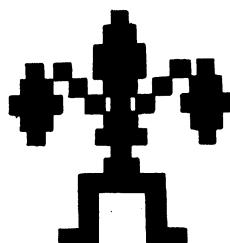
In attempting to reach positive conclusions upon the history



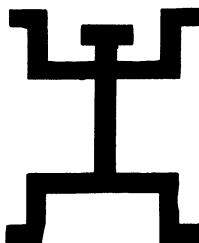
Section of design upon Manobo cloth from Agusan.

of ornament found in the Philippines we have a tangled web to unweave, as the several types of culture within the Islands, and the influence of the several nations, Asiatic and European, which have had a formative influence upon cultural conditions, are to be considered. The Moro, non-Christian Filipino, and other types of Malayan peoples, the Negrito, the Spanish, and Chinese, are all factors in the problem.

Though in evidence here and there, the Chinese influence is apparently of small importance in its effect upon native crafts. Decorated pottery jars, much-prized heirlooms among native



Dancing man of Isinai.



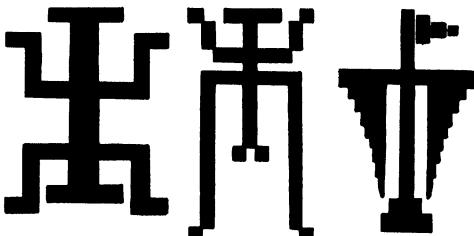
Dancing man of Ifugaos.

Filipinos, are found in numerous places in the Islands, but even though Tanaka Yonisaburo devoted two chapters to "Luzon pottery" in his book, "Investigations of Pottery," published in 1883 at Tokyo, and even though a mythical story

of the Tinguianes of Abra attributes the possession of a certain family jar to its being a gift from the spirits of Kabonian, still stronger evidence makes it quite probable that these jars are of Chinese or Japanese fabrication.¹ However, broken pieces of a jar were found recently in a burial cave in Siquijor Island, Oriental Negros, by Mr. Luther Parker, Bureau of Education, which bears a design of aboriginal character as does also a jar made near Tarlac and a clay pipe from Antique. The undecorated pottery of the Philippines is a familiar type, and certain decorated ware of modern character is manufactured in Pampanga.

The effect of Spanish influence, though of considerable extent, is the least interesting of all. It presents another example of deterioration through the policy of grafting entirely the art and craft of one people upon another quite different in culture and instinct. As it is the Christian Filipino who has been dominated by and imbued with Spanish culture to the extermination of much of his Malay inheritance, we must turn to the primitive people for typical decoration. Furthermore, as

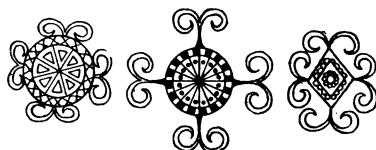
Malayan countries have contributed little or nothing to the five great arts but have reached great proficiency in certain minor arts, it is with the latter



Frog.

Monkey.

Serpent eagle.



Tattoo marks from Manobos, Agusan.

¹ See "Chinese Pottery in the Philippines," by Fay Cooper Cole with postscript by Berthold Laufer.

that we are concerned in studying the ornament of a Malayan people.

The art of embroidery introduced by the Spanish nuns reached a high degree of excellence in technic; but whatever was superior in design seems to have left no lasting imprint upon the needlecraft of the Philippines. It is only occasionally that we meet with specimens of any value for design and these are always to be found among the oldest work.

The Malay was accustomed to the use of wood carving as a means of ornamenting his house, utensils, weapons, and boats. We find some interesting examples of this in districts populated by the Christian Filipino where evidence of Malay influence is still strong. On bolo handles and the prows of boats the Malayan type of ornament is generally preserved entirely, but the corner posts and the outer baseboard around the outside of the house often bear decoration which is European in character, but is distinguished by the individuality of the craftsman, who was essentially a Malay.

The illustrations given here of the bolo handle and shield are of Malayan type. The ornamental dado is probably the result of Malayan influence upon European design and the palm-leaf ornament is a modern application of conventionalized form.

In the region about Banaue, Mountain Province, wood carving is also a common craft. The Ifugaos in this section make curious images of their anitos and use the same as ornamental handles for spoons and forks, as legs for stools and tables, and as decorations upon wooden hats or other articles of everyday use. These often show remarkably good conventional treatment of the human figure. The decoration upon wooden shields of the Bontoc Igorots and neighboring tribes is again an example of primitive ornament which sometimes affords good designs.

Since the weaving of cloth is an indigenous craft and is followed by both Christian and



Bamboo lime tube from
Agiao, Zambales
(Negrito).

non-Christian tribes, it presents a comparatively wide and interesting field for the study of native design.

In urban districts, such as that about Iloilo, the decoration upon the native cloths is of modern aspect, but native characteristics are present in the names given to the designs which are traceable to the superstitions and fancies of a primitive people. That symbolic representation is still prevalent is evidenced by examples such as that of designating an intricate lacing of lines as "Hardship" and two interlaced squares or two entwined blossoms as "Two lovers."

Other classes of designs which appear in several localities are those which are so far removed from the natural form through conventional treatment that they come to be more symbolic than representative in character. Among these the butterfly type, which appears frequently, is used in very similar form in Javanese cloth. One of the several legends which attributes a significance to the use of this design states that when it is used upon an infant's blanket, the child, like the butterfly, will travel much and lead a care-free life.

The meanings attributed to designs cannot be taken too seriously. They are often far-fetched and the real significance is forgotten by the people themselves.

With early Malayan people any mark which appeared by accident and could be construed into a resemblance to some natural object, or to the initial letter of the name of Allah, enhanced the value of the object upon which it appeared and was thought an omen of good fortune.¹

Frequently the native on being questioned will, because of a desire to live up to a reputation or not to disappoint the questioner, draw upon a ready imagination and supply a meaning wholly manufactured. It is only when the same

Inoised tang tang (lime box) from Butuan (Negrito).



¹ See "Malay Industries," part 1, F. M. S., Civil Service Report.

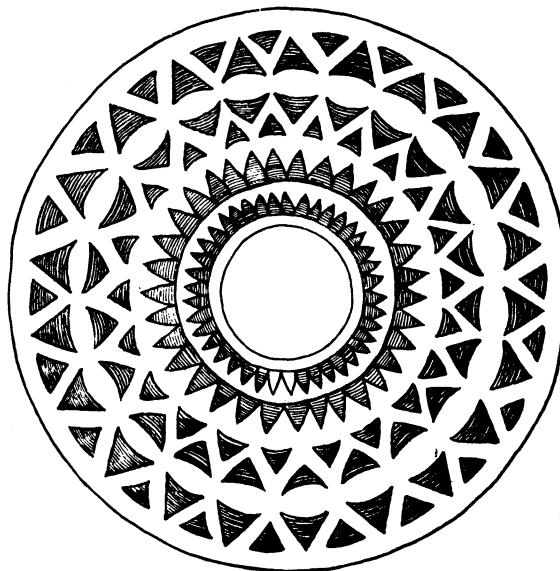
designs appear with the same meaning in numerous and divergent places that we can begin to build upon them a substantial structure of conclusion.

The cotton blanket, so called, is put to various uses among the native people. It serves not only as a bed cover but also as a protection from the weather, a wrapping for the dead, a canopy under which different ceremonies may be performed, a wall decoration, and a hammock. Figuring as largely as it does in the social life, it is not surprising that its decoration is an important feature.

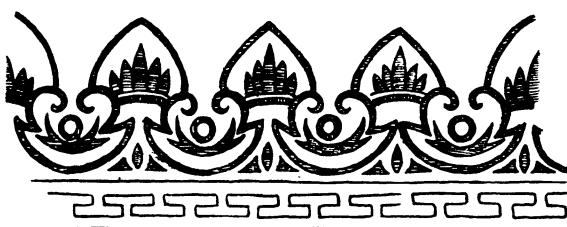
In the district along the southeast coast of Panay we find some interesting and peculiar specimens of design upon blankets used formerly as wall hangings on festive occasions, but which are now kept as heirlooms. The crowned rampant lion and the double eagle which appear upon these undoubtedly came from Europe, while the crowded surface and profuse use of animal forms are suggestive of Hindu influence. The human figure with the uplifted hands is a type common in Philippine ornament and in that found in Borneo and other Malayan



Incised bamboo comb
from Mariveles
(Negrito).



Ornament on Moro brass.



Ornament on Moro brass.

countries. The running foliate pattern which appears principally in the borders bears the aspect of Malayan ornament, and the freedom and naïveté with which the different animals are portrayed mark it as the work of a primitive people. Whereas the details present a somewhat grotesque appearance, the entire decoration is often very pleasing and the color combination so well balanced that it presents a neutral bloom into which the figures retire until it is necessary to search them

out in order to distinguish one detail from another. Some of the "all over" patterns are particularly attractive; the one above the lion border is called the "deer and scorpion" pattern and the diagonal lines repeated vertically, the "serpent" pattern. The latter name refers probably to the geometric form, as this is similar to that known in Ifugao and elsewhere as the "python" or "cobra."

The designs used in woven fabrics by the Ilocanos are generally modern and commonplace and again we turn to the non-Christian tribes for that which is refreshing in its originality. The skirts, clouts,



Tiruray basket.

jackets, and blankets of the Kalingas are particularly beautiful examples of striping in rich and harmonious colors, and the blankets from Guinsadin, Lepanto, and many of the G-strings from the Bontoc and Ifugao areas are simple and thoroughly good in both design and color. Interesting interlacing of geometric forms appears in the ornamental stripes upon the skirts and cloths of the natives of Apayao. The variety of both conventional and geometric figures in the Mandayan

cloth from Mindanao which is used with most satisfactory results has already been referred to;¹ a cloth bag from Cagayan, northern Mindanao, shows an unusually good treatment in both color and

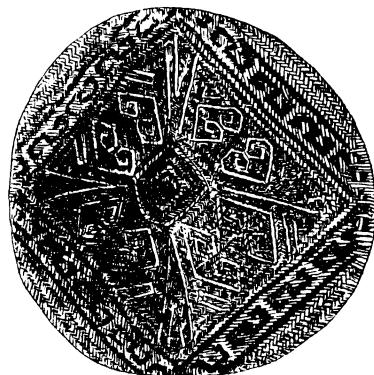
form applied to surface decoration. The Manobo cloth also offers good examples of a cross-stitch design. Among the Boggobos in southern Mindanao we find instead of woven patterns those wrought in beadwork which also bear good decoration.

The death blankets from northern Luzon show unique design in which highly conventionalized figures are used with good and, sometimes, excellent results. The Dupax blanket of the Isinais of Nueva Vizcaya is

one of the best examples. The design which is placed through the tie-and-dye process² is in white upon a dark-blue ground with



Tiruray basket from Parang.



Hat from Java.

¹ See *THE PHILIPPINE CRAFTSMAN*, December, 1912, article on Design.

² Tie-and-dye process described in *THE PHILIPPINE CRAFTSMAN*, December, 1912, "A Study of Distinctive Designs for Industrial Work in the Philippine Public Schools."



Basket from Celebes.

two dark-red stripes running lengthwise near the outer edges. We have no authentic statements as to the value of all the units which appear and the following are only probable interpretations. The whole design is thought to be representative of a feast.

The unit which is repeated in the motif of the large central space may represent the death chair with the tonguelike flames of fire which it is the custom to build under the body of the dead; the triangular figure formed of small squares which repeats itself in the central border across the end is called "wings" and the long zigzag, parallel with the sides, represents the python, cobra, or eel. Several of the small figures along the side edges will be recognized as parts of the dancing man. This figure of the man is different from that of the Ifugaos, since he is here represented as wearing a blanket hanging upon each arm—a custom followed by the Isinais when dancing.¹

The death blanket of the Ifugaos, though less ornate than the Dupax blanket, shows sound principles in spacing and arrangement of units, which results in a marked repose and dignity of design. This is increased by the pleasing color combinations in black, white, and low tones of red and yellow.

The weaving and decoration of these blankets are closely allied with the religious beliefs of the Ifugao people. The loom itself was a god-given possession. The gathering of dyewoods and the dyeing are accomplished through the aid of beneficent spirits. The units in design are conventionalized forms of animals, usually with a sacred significance, or of other objects from everyday life which have great value for one reason or another.

The figures of the dancing man, frog, monkey, python, cobra, serpent-eagle, water beetle, centipede, rice basket, and shuttle are all commonly applied.

Dances are a feature in many of the religious forms of the Ifugaos, and, since man represents the power next to the spirits,



Basket from Sumatra.

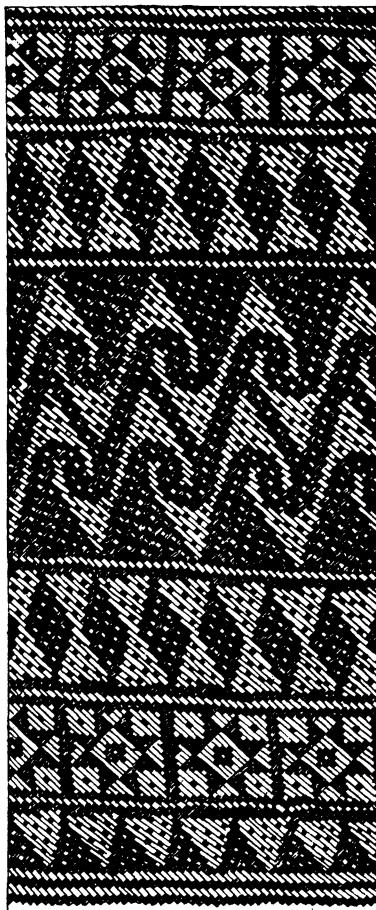
¹ From report of Mr. R. J. Bennett, Bureau of Education.

the figure of the dancing man appears in almost all decorative designs. The frog has more than one religious significance and is connected with rain and, in certain ways, with head hunting. The monkey is considered a degenerate man, an idea that shows the Ifugao not to be a Darwinite; and the mythical origin of the serpent-eagle attributes his existence to his having risen from the flames which consumed the body of a certain descendant of the gods. Another legend gives reasons for representing the python or the cobra.¹

The ornament which is used in woven fabrics appears also in the tattoo marks of the same tribe. The latter offers another source from which we may obtain decorative units of design. Lack of space prevents a more complete discussion and so only mere mention of this type of ornament is made.

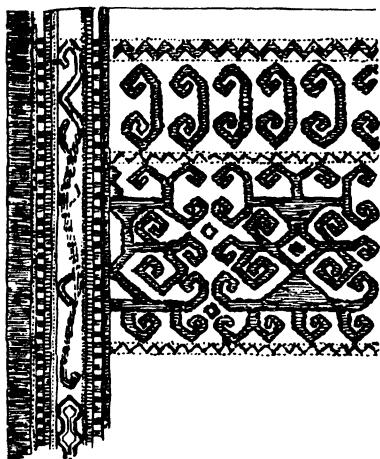
The illustrations of stars and planets given here are from the tattoos of the Manobos. Several variations of these and the sun symbol also appear, all of which have some religious significance.

In dealing with the subject of native ornament in design we cannot omit consideration of the Negritos. Even though they do comparatively little decorated craft work and only a minor amount of that little is apparent among the Negritos of the Philippines, still some very good examples of primitive ornament may be found which also have a historical value. Examples of pure Negrito ornament are confined almost entirely to incised patterns upon bamboo blowpipes, combs, and lime tubes.



Section of basket from Sumatra.

¹ Notes pertaining to the beliefs of the Ifugaos about Kiangan are from the report of Mr. Roy F. Barton, Bureau of Education.



Skirt of Dyak woman.

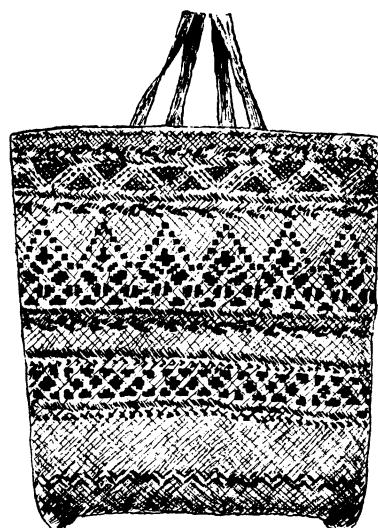
given considerable influence to Malay culture, was supplanted by the Arabs as early as the later part of the thirteenth century, though it was not until 1478 that Mohammedan rule was positively established. Under the Mohammedans the race improved in culture and carried this culture throughout the Malay Archipelago, the results of which may be seen in North Borneo, Sulu Islands, Mindoro, and Mindanao. The Moros were the last of the Malay tribes to migrate after conversion to Mohammedanism.

The Philippines owe no small proportion of their decorative designs to the Moros. The most beautiful examples are those upon metal in repoussé, inlay, and incised patterns. Metal work in the above styles, as well as in damascene, inlay, and niello ware is common throughout the Archipelago. The Malay Peninsula shows strong Javanese

The incised patterns upon the bamboos of the Negritos of Borneo and the Malay Peninsula offer much variety in simple design.¹

The art of the countries over which Mohammedanism has spread shows lasting monuments to its influence wherever that religion took root. Of the countries peopled by Malayan stock, Java appears to have carried applied art to the highest standard and under the Dutch régime is now far outstripping her sister countries.

Hinduism in Java, which had



Bag from Sumatra.

¹ A very interesting study of the above bamboos accompanied by stories of their origin and meaning is set forth in "Pagan Races of the Malay Peninsula," by Skeat and Blagden, and in "Natives of Sarawak and British North Borneo," by H. Ling Roth.

and also Indian influence upon design, that upon the kris often proving its Javanese origin by the application of Javanese names to the patterns, which fact is recognized by the Malays themselves.

The spears, bolos, and brass pipes of the different wild tribes of northern Luzon, particularly the head axes made by Tinguianes of the Ilocos Provinces, often present a very simple but good treatment of the zigzag and other straight-line patterns upon metal.

Of all the several crafts found in the Philippines, basket making gives place to none except perhaps weaving, and although much of the native basketry bears no decoration, numerous examples of good decorative design are found. Among these, some of the best are to be looked for in the Tiruray baskets from southwest Mindanao; the same type is found in other sections also. Some particularly good ones are from Parang, Taytay, and the Busuanga Islands in Palawan Province. Other types which are also good in both structural and ornamental design are from the Mangyans of Mindoro and the people native to the district about Miagao, Iloilo Province. Even though the undecorated baskets offer nothing for applied design, they are not to be cast aside, for structure is equally important with ornament and this class of basketry frequently offers excellent examples of graceful form well suited to its particular use.

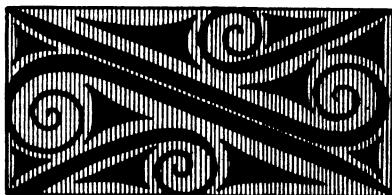
As one pursues the subject of native design it becomes quite evident that the Philippines, although they are by no means poverty stricken as regards decorative designs, afford a much less abundant amount of ornament than other Malayan countries. Whether this is due to the fact that craft work here has never reached the standard of other countries, or to its having been depleted through many changes in cultural conditions, is a question; but in either case the fact remains that Malayan ornament is the rightful heritage of the Filipino people and a legitimate source which may be drawn upon without the destructive effect which is always the result of copying from an entirely foreign people.

Not only do the several native crafts of the Philippines show a similar style in general to that of the peninsula and islands of the Malay Archipelago but they are often identical in structure, units of design, methods of dyeing, and in materials used. The illustrations of a hat, baskets, and cloth from Java, Sumatra, Celebes, and Borneo, and a bag from Sumatra which is similar

in its open design to Philippine mats from Romblon, indicate a common origin for these decorative crafts.

As oriental nations have regarded art rather as a means by which to symbolize ideas than as a literal imitation of nature, the value of the units used affords another, though an elusive, means of tracing the origin of designs. This, however, usually takes us beyond the confines of Malaysia and becomes an ethnological study of wide extent. Different legends giving the significance of units used in the Philippines such as the human figure, tiger, serpent, lizard, eagle, stars, sun, planets, and certain symbolic marks or signs afford a very interesting field for research.

The sources, both within the Philippines and the neighboring islands, which we may draw upon for designs of intrinsic value in our industrial work are numerous, and the use of these is a step toward preserving and widening native decoration; furthermore, this appears to be the only way open by which to fill present demands in this work of improvement. However, the possibilities of such procedure will not be fully realized unless it becomes an inspiration and stimulant for original work by the native Filipino. The occidental mind will hardly create or apply a style of ornament which is expressive of an oriental people, and so any lasting benefit from this movement on the part of the Bureau of Education must come really through educating the native student in the right principles and the history of design, particularly that of the peoples of the East. With this purpose in view, subsequent articles will appear which set forth the principles of design illustrated through historic ornament and the application of Philippine ornament to decoration.

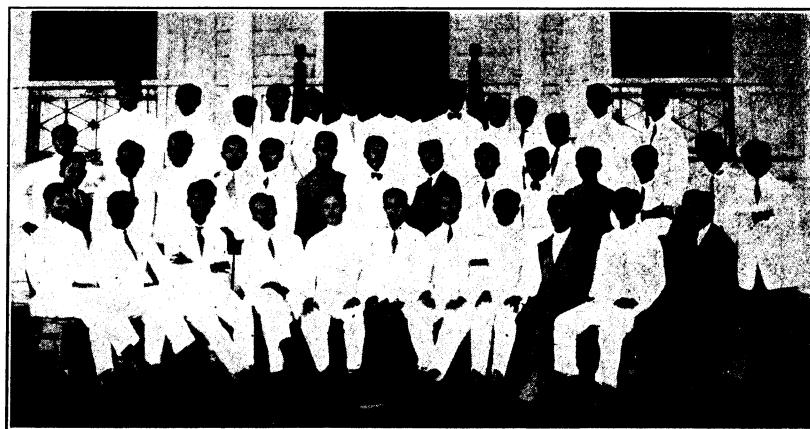


VOCATIONAL GUIDANCE.

SURVEYING.

By S. W. HULSE, Surveying Instructor, Bureau of Lands.

ON May 22, 1906, the Philippine Commission passed Act No. 1491 entitled "An Act providing for the education of Filipino students as surveyors." The Bureau of Lands, in common with other Bureaus, was contemplating the inauguration of a system of technical instruction for young Filipinos, and Act No. 1491 empowered the Bureau to proceed with the plan in conjunction with the Bureau of Education. Graduates of the



Surveying class, Manila High School.

course were expected eventually to perform the same duties as American surveyors, thus reducing the number of technical men to be brought out from the United States, and incidentally increasing the volume of survey work turned out by the Bureau and reducing the unit cost of surveys. Accordingly, on July 1, 1906, following the enactment of Act No. 1491, a class was organized under the direction of one of the regular surveyors of the Bureau of Lands. This class was first established in the Philippine School of Arts and Trades but was transferred later to the Manila High School. The enrollment during the first year varied from 4 to 10 students, but since that time it has steadily increased and on June 30, 1913, numbered 44—28



Holding the stadia rod.

for the course, the latter Bureau has regularly been offering an examination in March of each year, covering the subjects of algebra, grammar, composition, arithmetic, and plane geometry. Applicants passing this test are certified to the Director of Lands by the Director of Education as being eligible for appointment as apprentice surveyors at ₱240 per annum. The

students entering the first year and 16 the second year of the course. Fifty-four students have been graduated from the school and are at present employed in fieldwork in the provinces.

QUALIFICATIONS REQUIRED.

Students are required to be not less than 17 years old, of sound physical condition and good moral character, and must have such educational qualifications as are obtained by the completion of two years of high-school work. It is essential that their grades in mathematics be relatively high. In the matter of physical condition, good eyesight, good height and weight are considered essential, health and robustness being also requisites. A proper sense of the dignity of labor, willingness, trustworthiness, and ambition are some of the necessary qualifications. Students who have records of careful and accurate work during their first two years of high school can usually be depended on to have the proper qualifications, if physically fit.

The course prescribed by the Bureau of Lands is supplemented by regular high-school subjects offered by the Bureau of Education. As a test of suitable preparation



A rod man.

subject of surveying, in the first year of the course, is offered under the heads of chain surveying, compass surveying, leveling, circular curves, and drawing. Upon the completion of the year's work, students are required to take the civil-service examination for junior surveyor. Those successful in this examination are given appointments as junior surveyors at ₱360 per annum.

The second-year subjects are stadia and plane-table surveying, topographical surveying, hydrographical surveying, astronomy, city surveying, mining surveying, and general instructions of the Bureau of Lands. The text-books used are those of the International Correspondence School, with Johnson's Surveying and Breed and Hosmer's Principles and Practice of Surveying, Volumes I and II, as reference books. Fifteen geometrical and survey plates are required to be drawn and lettered during the two years, and these are supplemented by plans of practice surveys.

The fieldwork practice of the first year covers exercises in chaining, small compass surveys, plane-table sketching, adjustment of the transit, running of simple traverses with side shots to corners, and leveling. Second-year fieldwork includes stadia-reduction problems, extensive traversing, cadastral surveying, simple triangulation, and the necessary astronomical observations for establishing latitude and azimuth. The division of work is such that every student acts in the capacity of rodman, sketchman, chainman, levelman, or transitman many times during the course, and thereby becomes accustomed to all the divisions of the regular



Set-up over a monument.



Reading the tape.



Platting.

permanently assigned to the field, the first-year apprentices are assigned to the different parties in the provinces where their services can be used. Necessary traveling expenses, subsistence, and their regular pay are given the students, and their work under the American chiefs of parties serves to give them a first-hand knowledge of conditions and work. Upon the completion of the spring vacation, the apprentices return to Manila to complete the course.

Upon the completion of the second school year, the students are permanently assigned to field parties of the Bureau of Lands, under the direction and supervision of American chiefs of parties. They are assigned to the duties of computers, draftsmen, chainmen, rodmen, instrument men, and even as acting chief of party, depending upon their qualifications and ability and the requirements of the service. All traveling expenses while on duty away from Manila are paid by the Bureau. Subsistence allowance of ₱15 per month is also paid, together with necessary charges for quarters.

Every facility is afforded for

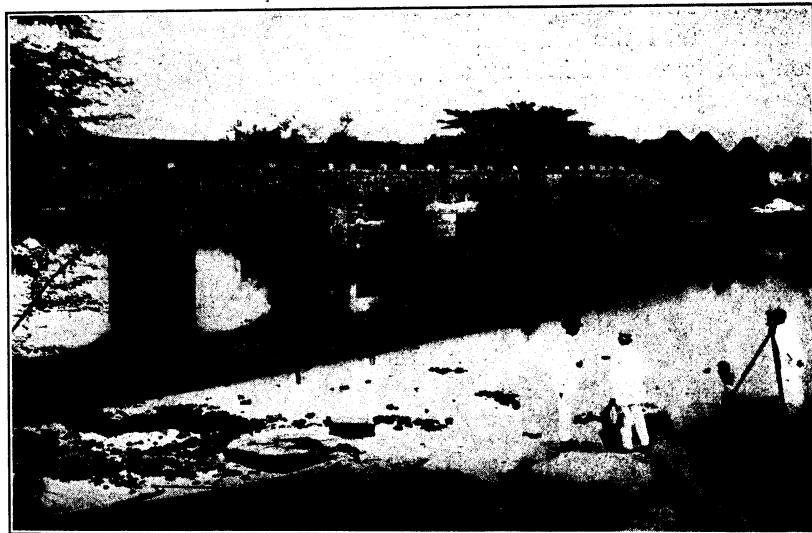
work. Record is kept daily of the capacity in which each student acted in the field. Practice surveys assigned are exactly like regular official surveys, and the same standards are observed and relative error of closure required.

On the 1st of April, when the graduates are



Taking a shot on Taft Monument.

making the students proficient in surveying and drafting. Drafting tools, instruments, mapping materials, and all necessary equipment, with the exception of the textbooks, are furnished by the general office. The second-year students are required to spend three afternoons a week on computations in the general office, where their work is subject to the same supervision and close checking by the American computers as that of the regular computers. The work performed is regular routine computations, with time charged out. Thus the students become familiar with general office standards and practice before final assignment to the field.



Field work.

THE OCCUPATION.

The occupation of surveyor offers steady, healthful employment, year in and year out, for young Filipinos, with prospects for steady advancement. The relatively small amount of land surveyed to date in comparison with the total amount of agricultural land occupied and available for occupancy gives sure indication of a steady demand for the services of an army of surveyors for many years to come. The work requires technical knowledge, skill in drafting, accuracy in figures, and experience with actual field conditions. The duties of a surveyor involve a happy combination of field and office work which is far less monotonous and more healthful than continuous office work. The payment of traveling and subsistence expenses is a great

added inducement. Conditions of travel throughout the Islands are improving steadily with the building of roads and railways, and the physical conditions encountered are better than those of similar professions, such as forestry or the military.

PAY.

Apprentice surveyors receive ₱20 a month from the date of appointment while studying the course. An increase of ₱10 a month during the second year is given all who pass the junior surveyor's examination. Upon graduation and assignment to the field, the pay of junior surveyors is increased to ₱50 a month with traveling expenses and a ration allowance of ₱15 per month. Thereafter a yearly increase of ₱10 per month is assured until the completion of the four-year contract. This contract is entered into by all junior surveyors at the time they pass the junior-surveyor examination, in accordance with which they agree to remain in the service of the Bureau of Lands during a period of four years from the date of appointment as junior surveyor, which leaves about three years of service to be rendered after graduation from the classroom. Permission is given to take the senior-surveyor examination either during the term of service, or upon completion of same, and upon passing that examination probational appointment is given as surveyor at a salary of ₱1,200 per annum, with a ration allowance of ₱30 per month and traveling expenses.

Promotion from this time on depends upon the length of service and the ability of the surveyor in accordance with civil-service rules.

COMMENTS.

There are at present 8 graduates of this course receiving ₱1,200 per annum each; 11 receiving ₱840 each; 16 receiving ₱720 each; and 29 receiving ₱600 each. Of the 44 at present in school, 11 are receiving ₱360 each and 33 receiving ₱240 per annum.

After the termination of the contract period the surveyor is at liberty to leave the service without prejudice. Several have done so and have found remunerative employment in excess of what could be offered them by the Bureau of Lands.

The Bureau of Lands is desirous of securing a class of at least 35 students in this course each year and there will always be positions open in the Government service for graduates at salaries ranging from ₱1,200 to ₱2,400.

NOTE.—Previous articles under the head of Vocational Guidance have been published on the vocations of marine officers, forest rangers, teachers, and nurses.

A REVIEW OF THE REPORTS OF DIVISION INDUSTRIAL SUPERVISORS FOR THE SEMESTER ENDING MARCH 28, 1913.

By GLENN W. CAULKINS, General Office.

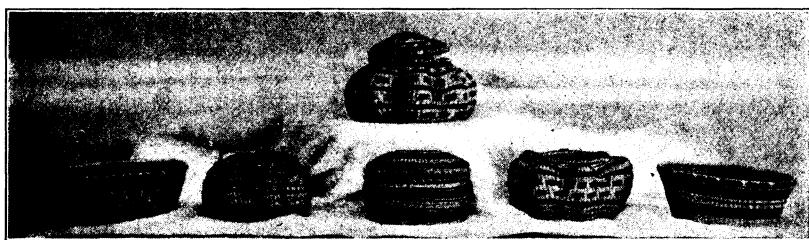
THE reports of the division industrial supervisors called for in General Office Circular No. 111, series 1912, for the semester ending March 28, 1913, present a statement of the industrial instruction in the public schools for the period covered, and a summary of the results of the year's work. The most



Good types of baskets.

significant fact brought out in the reports is that the industrial instruction is developing along practical lines which may be directly applied to improve the living conditions of the people. Home work in various lines is insisted upon more than heretofore; not school work performed at home, but the application at the pupil's home, and under the supervision of a teacher, of instruction received at school.

The standardization of baskets as to shape, size, design, materials, and workmanship has received general attention. This has brought about the elimination of baskets which are not salable or useful. A few new types have been standardized and introduced. Advanced basketry has been taught in a number of fifth-grade classes with very satisfactory results; these classes, for the most part, were made up of pupils who had excelled in basketry in the primary grades and were able to produce a superior article. There is more insistence upon thorough cleaning and preparation of materials and upon the exercise of care in securing excellence of finish. Karagumoy baskets in plain and mad weave find a ready sale and are being standardized. The extension of hat and mat weaving is proceeding more slowly, but where it has been introduced and given adequate supervision good results are reported. In one division loom mat weaving is taught in 16 schools and an article for which there is a large



Buntal baskets.

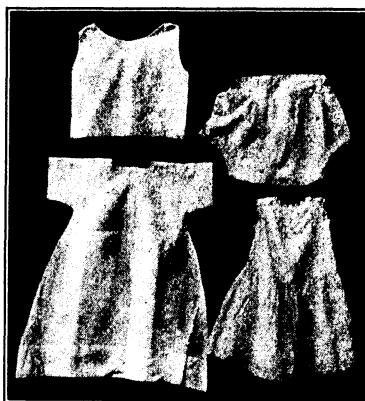
demand is produced; in another division the loom weaving of mats has been introduced into all central schools of one section of the province, for giving instruction in weaving matting and cushion covers. Home work is required.

The use of abacá fiber in the manufacture of slippers, coiled baskets, and articles of macramé has been extended to a number of schools where this work was previously unknown. Abacá articles, especially slippers, are a success commercially. The number of slipper makers who have received their training in the public schools is increasing. Articles of macramé include slipper tops, belts, hand bags, ladies' hats, and candle shades. All of these articles have been found to sell readily. Coiled basketry has been improved through the use of superior designs and by paying closer attention to securing correct proportions. The designs furnished by the General Office have been used to good advantage. Black and white lupis baskets and trays are popular and find a ready market.

The teaching of cooking in the primary schools was reported as being satisfactorily done in a number of divisions, but this subject does not appear to be as widely introduced as the course of study calls for. Reference was made to plans adopted in several provinces for training teachers of cooking at the Philippine Normal School and at provincial normal institutes. The work which is carried on, however, appears to be entirely practical, the aim being to teach plain home cooking, sanitation, and the value of cleanliness. A discussion of the application of this training to the home life of the pupil would have been interesting, as the test of the efficiency of instruction of this nature is the degree to which it affects the living conditions of the people. Instruction in plain sewing is making more rapid progress, due apparently to the greater amount of attention it has received at normal institutes.

The new elementary course in plain sewing (Bulletin No. 53, Bureau of Education) will no doubt be instrumental in widely extending this work and in making it more effective.

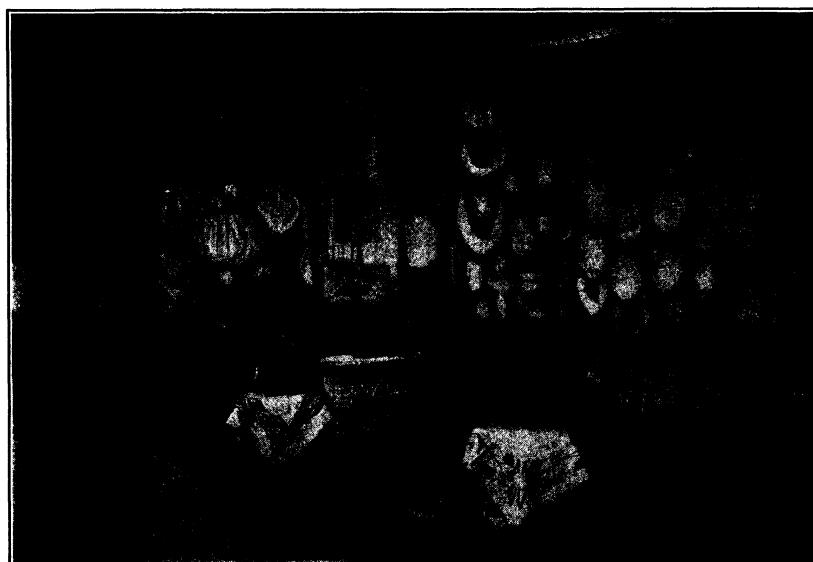
Instruction in embroidery, bobbin lace, and Irish crochet has been improved by means of thorough courses at normal institutes and by close supervision. Great improvement is noted in workmanship and design, and the introduction of needlework into the homes is mentioned in a few reports. It is obvious that too great a variety of work of this nature has been undertaken in many provinces. The only reason for the inclusion of this work in the public-school curriculum is to aid in establishing it firmly as a household industry. The first step in carrying out a plan for the promotion of home industries of this character, where they do not now exist, is to train a body of expert workers who may be organized into centers for the production of embroidery, lace, or other similar work. Manifestly the difficulties to be overcome in establishing any one line of work in a locality will be increased if a few workers in several varieties of work are trained rather than a large number in one industry. The use of revolving pillows for making bobbin-lace edgings and insertions



Practical work in plain sewing.

has been successfully tried in at least two divisions and should be extended.

The training of teachers for the municipal school shops already established has occupied the attention of teachers, rather than the extension of this work to other schools. Special classes in provincial trade schools for training teachers for municipal primary and intermediate carpentry shops are reported. A number of shops have been closed temporarily, pending the training of teachers, the purchase of the necessary supplies and equipment, and the acquisition of suitable quarters. The work of these shops is more practical than it has been heretofore; the



School booth at the Iloilo fair.

construction of hardwood furniture is discouraged, and exercise work and the construction of useful articles of furniture for home use are emphasized. The use of bamboo for the construction of home furniture is receiving more attention than formerly. The need of making early requisition for materials and for making adequate provision in the annual municipal estimate for funds for carrying on the shopwork is apparent.

School and home gardening has been widely extended during the past year, and more satisfactory results have been secured than in former years. This is especially apparent in those provinces which have given a definite course in gardening at their

normal institutes and have required at least one teacher in each school to complete such a course. The success of the instruction in gardening is measured by the extent to which it is introduced at the homes of the pupils and by the degree in which it has improved their food supply. The number of pupils' home gardens is constantly increasing and pupils are encouraged to cultivate a larger number of plots than is required. Native vegetables and vegetables similar to those with which the pupils are familiar are given precedence over doubtful imported varieties. Improved imported varieties of certain vegetables, such as tomatoes, have been especially successful. Pechay has been widely introduced where it was formerly unknown and its popularity is instantaneous in most cases. A number of divisions report that gardening as a requirement for the entire year brings about more lasting results; this applies to the home garden



An outdoor class in embroidery, Dumaguete.

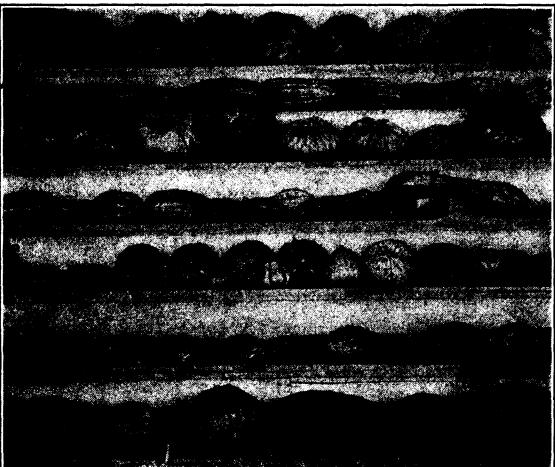
as well as to the school garden. Mention was made of injuries done to gardens by destructive insects and plant diseases; a full discussion of the subject, with a statement of specific remedies employed in combating plant enemies, would have been valuable. Nurseries for the propagation and distribution of fruit and shade trees are being introduced more widely. A large number of seedlings were distributed and were cared for by the pupils at their homes under the supervision of the teacher of gardening. One division reported nine school orchards which have been established as models for the guidance of the people of the community and as a means of giving practical instruction in fruit growing.

The most notable feature of the reports on the care and improvement of school grounds and buildings was the fact that a large number of standard permanent fences had been constructed.

Standard woven-wire fences with concrete posts were reported in many provinces; one province reported that one-half of the permanent sites had been permanently fenced. This is the first step in the improvement of school grounds. Funds for this purpose should be set aside in the annual estimate and requisitions for materials should be placed with the Bureau of Supply, through the General Office. The best results in the improvement of school grounds are reported where the pupils are arranged in groups for this work, each group to have a definite part of the improvement plan to work out. Good progress in lawn making is noted in some provinces. This work proceeds more rapidly in divisions which require one teacher

from each school to take a course at the normal institute in the care and improvement of school grounds. The care of home premises is taken up in connection with home gardening in some supervising districts with good results.

The manufacture of coir matting has been extensively undertaken in at least



Squashes from the school gardens.

one province, and a very serviceable and salable article has been produced. The reports on the new dyes were favorable. Exhibits for the display and sale of articles were held in practically all towns of many provinces. The attention given to the supervision of the industrial work in the barrio schools has brought about a much higher grade of work than was formerly produced.

The question of arriving at a proper basis for determining the prices of articles made in the schools was discussed by a number of industrial supervisors. This is a matter of concern to all supervisors and teachers of industrial work, as is evidenced by the disparity of prices of similar articles displayed at the annual industrial and sales exhibits. The two dominant factors which determine the prices of articles are the cost of materials

used and the value of the labor. In pricing such articles as embroidery and laces, the tendency is to make the price too high and to lead the pupils to believe that the industry is more remunerative than is actually the case. It should be explained to pupils that the price they will receive for work of this nature when they leave school and take it up as a home industry will not be the retail or wholesale price, because profits must be made by the local agent or broker, the exporter, importer, and wholesaler before an article reaches the retailer who sells it to the consumer.

The importance of the thorough training of industrial teachers at provincial normal institutes was clearly brought out in the reports. By concentrating the efforts of the normal along a few lines in training teachers of the entire province a greater degree of uniformity is brought about and non-essential work is eliminated, thereby facilitating the work of the supervising force.

In so far as it is possible and practicable, the province should be the unit in determining the subjects to be taught. In many instances too great a diversity of subjects is pursued in a school and there are too many changes from one year to another.

It is apparent that, as a general rule, the girls' industrial work is not so well balanced as is that for the boys. Industrial work for girls, such as cooking, plain sewing, and garment making, which is designed to be applied directly at the pupil's home in



Two young gardeners.

improving living conditions, does not receive the same amount of attention that is given to subjects such as embroidery and lace making, which are taught in order to provide remunerative employment for girls when they leave school. For the correction of this condition a survey should be made of each industrial class for girls to determine the amount of time devoted to each of these two lines of instruction, and steps should then be taken to bring about a proper balance of work.

The service rendered by the assistant industrial supervisors was generally the subject of favorable comment. The establishment of small provincial museums of standard articles was also noted as an important factor in standardizing articles and in bringing about superior workmanship and an appreciation of



Modern implements used in corn demonstrations.

design. The increased attention given to design, especially as applied to basketry and mat weaving, has been the means of producing a superior article.

In general, the reports give evidence that a systematic effort is being put forth to provide industrial instruction that may be directly applied in raising the standard of living of the people. The close scrutiny to which the entire system has been subjected by everyone concerned in the work of instruction, supervision, and direction, through conferences, reports, and inspections in the field, has been instrumental in directing the instruction along practical lines and in eliminating exercises and lines of work that are nonessential or nonprogressive. The crystallized sentiment expressed in the reports submitted is set forth in the motto, "Education for service."

AGRICULTURAL ACTIVITIES IN THE SCHOOLS OF AGUSAN.

By NORTH H. FOREMAN, Inspector of School Gardens and Sites.

THE division of Agusan is composed of the two subprovinces of Butuan and Bukidnon, which are located in the northern part of Mindanao. The work of the schools there is concerned with the Visayans in the small strip along the coast, the Manobos of Butuan, and the Bukidnons of Bukidnon.



Agusan booth, Industrial and Sales Exhibit, 1912.

In this section a number of schools giving agricultural instruction have been established and the following report of the products for the school year of 1912-13 indicates the success of this line of work.

In the home and school gardens of the Christian section, in the three agricultural schools, and in the 41 settlement farm schools emphasis has been given to the actual cultivation of the

following products as shown with the local value and the amount of production of each:

| | Products grown. | | Amount. | Local value. |
|-------------|-----------------|----------|----------|-----------------|
| Atimans | number | 586 | \$29.30 | |
| Arrowroot | cavans | 18 | 18.00 | |
| Bananas | bunches | 990 | 198.00 | |
| Beans: | | | | |
| Green | gantas | 554.5 | 83.17 | |
| Shelled | cavans | 4 | 12.00 | |
| Cabbages | heads | 204 | 30.60 | |
| Camotes | cavans | 1,710.28 | 1,396.14 | |
| Cassava | do | 81 | 121.50 | |
| Coconuts | number | 70 | 2.10 | |
| Corn: | | | | |
| Ear | cavans | 951.02 | 1,802.04 | |
| Ear (green) | number | 342 | 25.92 | |
| Cowpeas | cavans | 80.12 | 280.42 | |
| Eggplants | number | 27,701 | 277.01 | |
| Gabi | cavans | 259 | 518.60 | |
| Ginger | gantas | 26.5 | 5.30 | |
| Mongos: | | | | |
| Shelled | do | 73 | 10.22 | |
| Green | gantas | 30.14 | 105.49 | |
| Mustard | bunches | 493 | 22.79 | |
| Onions | do | 512 | 8.24 | |
| Okra: | | | | |
| Green | gantas | 62 | 9.30 | |
| Dry | do | 600 | 90.00 | |
| Palay | cavans | 171 | 513.00 | |
| Papaya | number | 2,169 | 65.07 | |
| Peanuts | gantas | 1,346 | 538.49 | |
| Peppers | do | 171 | 25.65 | |
| Pechay | bunches | 172 | 25.80 | |
| Pineapples | number | 121 | 4.84 | |
| Radishes | do | 1,027 | 30.00 | |
| Roselle | gantas | 5 | .50 | |
| Tobacco | hands | 77.8 | 23.34 | |
| Tomatoes | gantas | 599 | 103.60 | |
| Turnips | do | 5 | .75 | |
| Sitas | do | 7 | .98 | |
| Sugar-cane | stalks | 709 | 7.09 | |
| Ubi | roots | 20 | 2.00 | |
| Watermelons | number | 526 | 52.60 | |
| Total. | | | | 6,531.26 |

From the above we may see the extent to which native and actual food products are included. In this connection it must be noted that the value of the products produced is a matter of actual record and not an estimate. This valuation does not include the heavy losses by storms, locusts, and the thieving of both animals and men. It is also to be noted that the valuation is low on many of the products on account of lack of a medium of exchange, money not having entered extensively into the home life of the people. The value of the products is greater than any financial valuation, for the reason that all products are for local consumption by the people and are given to the school pupils to be taken home, thus forming an integral part of the food supply of the people. These food centers, which may well be called farms, are located over a wide area of sparsely inhabited country which varies from the heavy tropical woods



Cowpeas, Settlement Farm School, Ipasugong, Bukidnon.

inhabited by the Manobos to the wide grassy plains inhabited by the Bukidnons.

It is the ultimate aim of the Bureau of Education to develop (a) at each of the agricultural schools an actual food center in the way of well-cultivated 30-hectare farms; (b) at settlement schools, farms of from 3 to 5 hectares in area, depending upon the size of the school. The following tabulation of the area under cultivation and the relative value of products grown will be of interest to those who are acquainted with the different localities of this part of Mindanao:

| Name of school. | Hectares under cultivation. | Value of products produced. |
|--|-----------------------------|-----------------------------|
| Mailag agricultural school | 13.67 | P262.00 |
| 21 settlement farm schools for Bukidnons | 39.32 | 1,673.45 |
| Total for Bukidnon schools | 52.99 | 1,935.45 |
| Butuan agricultural school | 3 | 592.85 |
| Bunauan agricultural school | 5.19 | 751.46 |
| 20 settlement farm schools for Manobos | 27.84 | 2,927.26 |
| Total for Manobo schools | 36.03 | 4,271.57 |
| 9 school gardens | 1.1 | 624.24 |
| 282 home gardens | 6.9 | |
| Total for the division of Agusan | 97.02 | 6,831.26 |

This is a remarkable showing when it is remembered that the oldest of these settlement farm schools are only 4 years old and that many of those for Manobos have been developed during



Bukidnon schoolboys using a modern plow, Mailag Agricultural School, Bukidnon.

the past year. The development of such schools must necessarily be slow, because of the fact that all of the work of clearing the land and placing it under cultivation must be done by school pupils. In connection with this extensive agricultural plan of the Bureau of Education, it should be noted that this work is the only real agricultural work in each of these sections. The people for centuries have followed the caingin system, but under the influence of the schools and by the aid of the considerable food supply which the farms make available, permanent settlements have been established with the school as the center, and the people are fast becoming accustomed to the development of a piece of land by the use of simple agricultural implements. This section of the Philippines will some time be discovered by agricultural men, who will be surprised to find that for several years agricultural education closely adapted to the needs of the people has been emphasized by the Bureau of Education in the development of the school work, the people, and the country.

I do the best I know how—the very best I can; and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won't amount to anything. If the end brings me out wrong, ten angels swearing I was right would make no difference.—Abraham Lincoln.

PAPER-PULP DOLLS.

By JOHN C. CUDOBA, Division Industrial Supervisor.

FROM time to time dolls made by school children have appeared at the various industrial exhibitions of the Bureau of Education and have caused favorable comment. Notably in one case a ready sale was found for such dolls, though probably this was due more to the novelty of the native dresses than to any excellence in the workmanship of the dolls. The dolls in question were rag dolls, with all the drawbacks of rag dolls; and it is believed that if a good type of doll, comparing favorably with dolls made in the United States, were made in Philippine schools, there would immediately arise a great demand for them, both in the domestic and foreign markets. Ultimately some factory, equipped with proper tools and machinery, would take up the work, but in the meantime a congenial occupation might be introduced into the public schools which would attract and train pupils of both sexes—the boys making the dolls proper and the girls the clothes.

At the inception of this work it was necessary to seek some suitable material for making the heads. The bodies were easily made of cloth, stuffed with "kapok" or other like material, and thus answered all purposes. But the heads, to be hygienic and durable, had to be made of something better than rags. Then, too, a rag doll can never be given the characteristics of face and feature that are possible with more adaptable material. Paper pulp, or papier maché, was finally chosen as the most plastic material available. Once this was selected, the rest of the work progressed without interruption.

As paper pulp is so well known, no instructions for making it will be given beyond stating that thorough maceration and boiling are necessary to obtain the best results. The addition of flour paste will make the pulp cohesive and quick to take the desired form. It is possible that other materials besides paper pulp could be used. Lupis, or hemp waste, and corn husks, if thoroughly macerated and boiled, might serve the purpose.

The bisque head of an 18-inch American doll was used as a model. The hair was removed and in its place clay was modeled to represent the headdress in vogue in the Philippines. Ordinary Portland cement was used for the mold. A common

cigar box held the mold in shape till dry—a matter of thirty-six hours. In order to allow for the convenient removal of the heads, the mold is poured in three pieces—one for the face, one for the back, and a wedge-shaped part for the lower fraction of the mold to serve as a "key." Ordinary iron wire stuck in the different parts of the molds while they are still in liquid form will do much to strengthen them and make them safe in rough handling. Pegs joining the three parts will assist in making better casts.

There is some knack in getting a perfect cast, so that the pulp will enter all the crannies of the mold. Practice will make perfect, here as elsewhere. The pulp head should be allowed to dry thoroughly; no artificial heat should be used, as this has a tendency to roughen the surface of the cast and produce unsightly marks.



A paper-pulp doll.

When the head is thoroughly dry it is attached to the cloth body prepared for it. This is best done by thrusting a small stick or dowel, smeared with paste or glue, through the neck into the head, and then down into the kapok-filled body. The space between the head and the body is then modeled in with fresh pulp and the whole again allowed to dry. When dry, the

cloth of the body near the neck is drawn up and fastened to the pulp to prevent the kapok from escaping.

In painting the head, care should be taken to have the pulp "bone" dry. Several coats of paint are necessary and each coat should be allowed to dry well before the next one is applied. Enamel was found preferable, as it gives a lifelike luster to the hair and face and dries very quickly. Human hair should not be used for hygienic reasons; and further, if this industry ever attains any importance it will be difficult to obtain a sufficient amount of hair without disastrous results to the Filipino women.

The teachers and girls assigned to sew dresses for the dolls became very enthusiastic over the task and each one tried to make a more original and better dress for her doll than her companions did. A few years ago a large assortment of these dolls was made, each one having a different costume, ranging from the ordinary "tao" dress to bridal or mourning costumes.

When the novice takes up this work of paper-pulp dolls, he should be prepared for several failures until he becomes familiar with the peculiarities of the materials employed. However, it is believed that anyone following the brief suggestions given here can, in a short time, turn out creditable work and add various improvements. There is a good deal to recommend this class of work, but much remains to be done to place it on a practical and paying basis.

WILL LEARN THEIR APITUDES.

In all schools, children should be taught to work in wood and iron, to understand the construction and use of machinery, to become acquainted with the great forces that man is using to do his work. In this way boys would learn their aptitudes—would ascertain what they are fitted for, what they could do. It would not be a guess or an experiment, but a demonstration. Education should increase a boy's chance for getting a living. The real good of it is to get food and roof and raiment, opportunity to develop the mind and body, and to live a full and ample life. The more real education, the less crime; and the more homes, the fewer prisons.—Robert G. Ingersoll.

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TAKING CARE OF THE LITTLE THINGS.

The little things are the big things of this life. There is a certain exhilaration about doing big things—about making a big showing—but it is the doing of the little things well that shows the real merit in a man; and the saving of little things that makes big fortunes.

It is told of Stephen Girard that he would even pick up a crooked nail and straighten it. He did not become rich on reclaimed nails, but he did become rich because he had an eye for every small saving. The straightening of the lowly nail only showed his capacity for seeing and doing little things. Through this capacity he amassed an immense fortune, and he was the recognized American merchant of his time.—Gasuco Herald.

THE DEVELOPMENT OF INDUSTRIAL INSTRUCTION IN THE PHILIPPINES.

By AUSTIN CRAIG, Associate Professor of Oriental History, University of the Philippines.

THE first modern industrial training in the Islands was given in Cavite some ninety years ago, in an American trade school, with an exceedingly practical course. An American naval officer, a lieutenant of the same family name as our late Director of Education, found the Spanish dockyard at Cavite unable to make the ironwork repairs needed by his ship and met the difficulty by training Filipinos. These proved apt pupils and speedily became skillful enough to serve his purpose. His published account of Pacific Ocean travels contains high praise of their efficiency as mechanics and reliability as workmen. Of the Spanish authorities and the prospect for progress under their administration, Lieutenant White had as definite, but less favorable, an opinion; one, however, confirmed by subsequent events.

The present idea in Philippine education is more directly traceable to Sinibaldo de Mas, traveler, diplomat, and student of oriental languages, who, in 1843, rendered the Spanish Government a confidential report on its far-eastern possessions. Like the putting in its place on the Luneta of the double monument to the conqueror for Spain and the Christianizer of this long-lost paradise; the making accessible of a mountain summer and health resort; the completion of Manila's harbor, and many another laudable Spanish projects, America had to carry out the plan.

Still, it is worthy of noting and remembering that, after discussing dispassionately the two active policies of seeking to retain the Philippines and of preparing them for separation from Spain, this observer of nearly three-quarters of a century ago wrote, under the topic of self-government:

The interest of a State consists, as I see it, in having a dense and well-educated population, and I do not speak only of literary or political education, but of that general education which makes each one perfect in his trade—I mean in *that education which constitutes a cabinetmaker, a weaver or a blacksmith, the best cabinetmaker, weaver, or blacksmith possible*. The greater or less number of machines is, in our century, an almost sure thermometer by which to gauge the power of empires.

The report was not acted on, of course, or there would have been a more creditable record for Spain's last half century in the

Orient; and all the years it was kept secret and half forgotten, until the transfer of the Archipelago to a power whose policy was for the Filipino people. The countrymen of Jefferson, like him, knew of no better light for their feet than the lamp of experience; and in order to plan the Filipino's future in an intelligent manner, took a census of his existing status and made a strict search into the history of his past. Recalling that the first Philippine Commission was headed by the president of the institution which gave practical effect to Ezra Cornell's revolutionary ideas of higher education, no further explanation is needed of how Mas's arguments found easy converts in these men who, as makers of the new Philippines, were no less remarkable for their willingness to learn than for their ability to escape hereditary prejudice in approaching new problems.

Other reasons there were, too, taken from Philippine history, urging a policy for developing a people out of clinging weakness into self-dependence, which was but an extension of the old English adage—

He'll seldom need aid,
Who has a good trade.

The Economic Society of Friends of the Country, under its equivalent name in Spanish (from the awakening of interest which came with the Filipino's first settling down after his brief experience of liberty and license, about 1823, till the paralysis which attacked all local efforts toward advancement after the Cavite warning of 1872), intermingled plans for popular and elementary education and for industrial training and study in a way that showed a desire to, and that at times actually did, combine book learning with field or shop practice. With an early distribution of grammars, spellers, and readers went the endowment of a chair of agriculture in Manila. Translation of an American guide to monitorial instruction, which would cheapen elementary education and so permit it to be more extensive, accompanied the sending to North America for rice-hulling machinery. A school of drawing was established and also a traveling scholarship for studying dyeing in India.

In 1824 there were eight scholarships in dyeing, and the society's school, probably the earliest regular trade school in the Islands, graduated its first class of dyers. Two years later came bulletins on indigo and coffee, and, after another like interval, a manual of elementary drawing—quite like to-day, you see. Then, after two years, another public educator was put at work, a "journal of industries and commerce" (for these early edu-

cators seemed to believe, as most of us do, that industrial instruction in its advanced stage must be commercialized), and this paper, "The Price Current," was printed in English as well as Spanish.

The later forties saw scholarships for Filipinos to study mechanics in foreign countries, and in 1855 there was a project for a school for small children, accompanying the free issuance of elementary texts on coffee cultivation, indigo, and the principles of drawing—that is, primary industrial instruction.

Next, just half a century ago, a royal decree established near the present Philippine School of Arts and Trades a practical school of botany and agriculture in connection with the Botanical Garden. This garden was endowed by one of the latest acts of the society, and a little later bulletins on coffee, cacao, sugar, and abaca were issued. Attention was then transferred to literary lines which, dealing with the remote glories of Spain in a sufficiently adulatory tone, were safer in those days of doubt and dread, when unrestrained military courts held as treasonable to the mother country the faintest suggestion that any good thing could come from outside of Spain.

One Filipino there was who, in winning one of the society's literary medals, was bold enough to contrast the past prosperity with the prevailing poverty, which brings us to the next factor in modern industrial instruction—Dr. José Rizal, then a student of agriculture. There is now needed no reminder of how a Calcutta-educated uncle had inspired him to study abroad, that in Sinibaldo de Mas's native city he found most interest in the trade school, considering it largely influential in the advancement of this English-like city of Catalonia beyond that of Spain's capital. One of the five objects of his "Philippine League" was the encouragement of instruction, agriculture, and commerce, and his program of reforms for the Islands provided for a trade school in every province. He was himself a conspicuous example of modern training, for his hand, eye, and mind had been taught to work together, and he was master of the bookbinder's trade, if not of the printer's too. Dr. Rizal carried on an English-speaking industrial school in his exile at Dapitan. The influence of this man, whose education and experience had given him exceptional qualifications and whose sacrifice of life had established his sincerity, undoubtedly had weight in this question as it had, and still has, in so many others.

The American Government early established the Philippine School of Arts and Trades for the Archipelago. Then came pro-

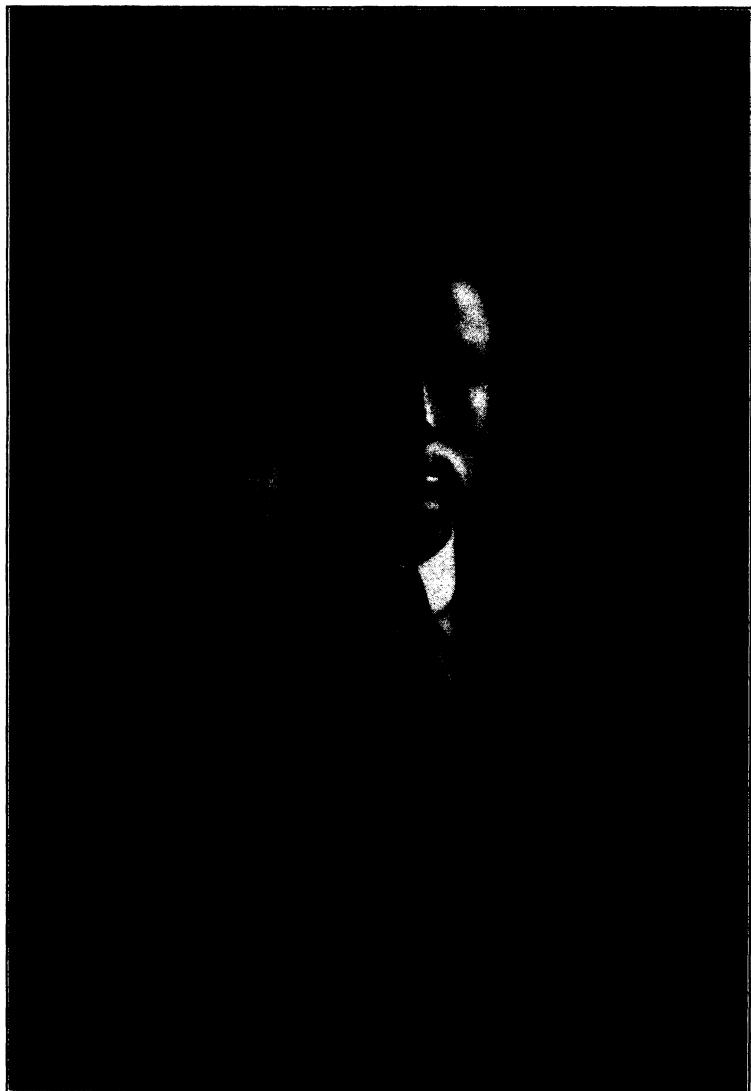
vincial trade schools, trade courses in intermediate schools, a handicraft year in the primary schools, minor industries in the lower grades, and then the approximate realization of the ideal that in whatever year the pupil might drop out of school he would still have achieved some manual skill which would make him capable of earning a better living than would have been possible had he dropped out a grade lower in the course. Now, while the weak points are being strengthened, the work is being better systematized, bulletins are doing a sort of extension mission among adults, and the commercializing of industries is assuring and bettering their markets, just as investigation is developing new resources and experience is improving old methods.

But the fact that the beginnings were made nearly a hundred years ago and have ever since been widening their influence assures the stability of the present system for making industrial instruction universal throughout these Islands with a breadth and completeness perhaps not equaled elsewhere to-day.

THE VALUE OF NORMAL INDUSTRIAL INSTITUTES.

That the value of the normal industrial institute to the municipal teachers cannot be overestimated is evidenced by the interest taken in the industrial courses. This meeting of the teachers is the most practical and efficient means of promoting the industrial spirit. The constant change in the aims and methods of the work, lack of industrial training in the teaching body of municipal teachers, the inadequacy of industrial literature, and the failure to grasp properly its importance fully warrant the gathering together of such assemblies. The institute is also a vital means of growth to the teacher. Widely divergent methods and problems peculiar to this country make the convening and association of teachers from all parts of the province of inestimable value.

The work is made congenial and recreative, and there is always the afterfeeling of satisfaction of something accomplished. For the Bureau of Education it is a safe investment of time and money, with practically sure returns in proportion to the interest and effort of the teacher afterwards. Moreover, from the ranks of these teachers can be picked the earnest men who are in full sympathy with their work for the benefit of the profession, the school, and the country.—Jos. H. Loughran.



FRANK RUSSELL WHITE,
Director of Education, 1909-1913.

Born at Milburn, Illinois, June 8, 1875.
Died at Manila, P. I., August 17, 1913.

EDITORIAL.

In Memoriam

Frank Russell White

Director of Education

"IN THE MIDST OF LIFE, WE ARE IN DEATH"

In no connection have we ever had the full force of the above quotation more emphatically brought home to us than in the death of Frank Russell White, Director of Education, which occurred in Manila, August 17, 1913.

Mr. White was born at Milburn, Ill., June 8, 1875, and was therefore only a little over 38 years of age at the time of his death. At the age of 9, he removed with his parents to Nebraska, where he received his early education in the common schools. All of his adult life was devoted to activity in the field of educational endeavor. At the age of 18, he entered Bellevue College, Nebraska. After two years of study there, he dropped out of college and engaged for a similar period in teaching in the rural schools near his home. He then entered the University of Chicago, where in 1900 he received the degree of bachelor of philosophy, the progress of his studies having been interrupted in the meantime by another year of teaching.

Soon after his graduation he was appointed an inspector of the charitable institutions of the city of Chicago for the Associated Charities of Chicago. But he was not to remain long in this position. The plans for education in the Philippines were taking definite form and a call was made for trained teachers. Mr. White was among the first ones recommended. He was appointed in May, 1901, and a month later he arrived in Manila.

Within a few months after his arrival he was made deputy division superintendent for the province of Tarlac. A year later this province became a separate school division, and Mr. White was continued in charge as division superintendent. Early in the following year the General Superintendent of Education, feeling the urgent need of some one to assist him in his administrative and professional duties, transferred Mr. White to the

General Office in Manila and made him assistant to the General Superintendent.

Following "The Reorganization Act" of 1905, Mr. White became Second Assistant Director of Education; and in 1909, upon the resignation of both the Director and the First Assistant Director, he was intrusted with the position of chief responsibility in the Bureau. He lost no time and experienced no difficulty in gaining complete mastery of the situation. His six and a half years of experience as an assistant to the head of the Bureau had made him thoroughly conversant with all of its workings; and his personality was always such as to invite and secure the heartiest coöperation and support of his subordinates.

To think of the Bureau of Education is to think of Frank R. White. The record of the past twelve years of his life would form an interesting and important chapter in the history of education in the Philippines.

It is said that opportunities make great men. In behalf of the great man it should be said that he is the one who turns an opportunity to good account when it comes his way. Undoubtedly, Mr. White's greatest achievement was the definite establishment of vocational instruction generally throughout the educational system, at the same time not sacrificing any of the purely academic interests of the schools. Mr. White was not the originator of this idea, as is evidenced by the fact that considerable progress had been made along this line before he became Director. But the time was ripe for a general movement; and the educational superstructure built under his direction upon the foundations laid in earlier years is the most enduring monument to his memory.

His unerring sense of justice; his sound judgment; his broad comprehension of human affairs; and his unfailing consideration for others combined to make him a man worthy of the sentiment expressed by one of his teachers in a message of condolence: "A prince is fallen in Israel."

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The editorial staff has no pet ideas to carry out in this magazine. Its only desire is to make THE PHILIPPINE CRAFTSMAN of the greatest possible value to the men and women in the field. To attain this end, readers are requested

**Help yourself and
others by asking
questions.**

to write freely for information which, owing to the extremely limited sources at their disposal in the provinces, they cannot obtain locally. Industrial teachers frequently encounter problems of operation which they cannot solve. There are usually a number of points in their

work which need to be made clear. If these difficulties are submitted to THE PHILIPPINE CRAFTSMAN, articles will be published on all points of general interest which may be brought up in this manner, thus assisting all readers confronted with the same problems.

We are anxious to publish as many articles as possible that will aid the industrial teacher in his daily task. Subjects for general articles are plentiful, but it is desired to make our columns of direct specific value in the solving of the problems that confront the field. Without the coöperation of our readers, the editorial staff is more or less at sea in selecting material for publication and must depend almost wholly upon their own personal experiences instead of profiting by the combined experiences of the whole industrial force.

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The industrial museum established at the General Office by the Bureau of Education not quite two years ago—more or less in the nature of an experiment—has, in this short space of time, come to occupy a permanent and important place in the industrial program of the Bureau of Education. The museum serves the public schools in the same way that a library serves a community.

Local museums. Instead of books, its chief assets are finished articles. These are loaned to persons, studied by them at their leisure, and returned to the museum within a reasonable length of time. To the student and worker who seeks accurate knowledge and demands a minute examination of articles, this feature of museum activity will appeal with the greatest force. To the general public, the permanent exhibit of the museum proves most interesting, for every visitor is bound to find in the collection something of particular interest to him.

In addition, in the museum there are prepared special industrial exhibits which are generally shown in the capitals of the various provinces under the care of competent instructors. With these exhibits it is aimed to reach especially those communities that are, as a rule, deprived of the opportunity of seeing high-class industrial work. However, it is not possible to reach the seven hundred odd municipalities in the Islands, nor the thousands of barrios in which the bulk of the population lives. In order to provide equal opportunities for all schools, local museums should be established at each provincial capital, to serve the various municipalities comprised within the province, and in each municipality, to aid industrial work in the barrios.

It is not expected that these museums should start their work with all the equipment at the disposal of large institutions. A few good samples of the best industrial work obtainable, perhaps, and a few plant specimens would be satisfactory for a nucleus. If as much time is given to the care of the collection as to its assembling, the local museum will then become a reality. Perhaps "museum" is a misnomer, for to some the word museum typifies a picture in an art gallery or a magnificent display of art work. Such should not be its significance. A beginning should be made with a simple display that in time will develop into an institution worthy to be called a local museum, which will play an important part in the present industrial program of the Bureau of Education and serve to promote the industrial welfare of the Islands. Bulletin No. 46 of the Bureau of Education, which was recently received from the printer, contains some helpful suggestions along this particular line of endeavor.

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Perhaps in no other institution of the Bureau of Education so much as in the Normal Institute, is the educational policy of the Bureau manifested. Time was, in the Philippines, when

the chief aim in holding a normal institute was to get teachers from different parts of a province acquainted with each other and to give them instruction in the English language and the usual academic subjects which a teacher is required to handle in the course of the work of making the pupil really literate. In those days the Bureau had to reach the people through the medium of teachers most of whom, although they were acquainted with the mechanical phase of teaching, were of relatively meager attainments.

The teachers of to-day who were in the service ten or twelve years ago have acquired such a knowledge of English and allied academic subjects, and those newly entering the service have had such training, as to make it unnecessary to spend so much time as formerly on academic instruction in the normal institutes. Consequently, the subjects receiving most attention are such as pertain to economic and industrial matters.

A child, to be properly educated, must not only be made literate; he must be made self-dependent, self-supporting. If he derives both literacy and self-dependence from the home influence, well and good; they may be added to at school. If he derives neither from home, it is the duty of the school to give him both.

Because of the fact that the teachers of to-day are of sufficient academic attainments for all practical purposes, the normal institutes nowadays are largely given over to the dissemination of such practical knowledge as may eventually assist in making each individual member of the body politic a producer of something having real tangible value.

The whole Archipelago is teeming with raw material which simply awaits the master hand to convert it into the finished salable product; and the Filipino's infinite patience and capacity for detail render him peculiarly adapted for taking advantage of this wealth of raw material, if he is but shown the way and made acquainted with the beneficial results derived from applying himself.

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The industrial work for girls, as prescribed in the course of study, resolves itself broadly into two divisions, as follows:

(a) Instruction in cooking, plain sewing and garment making, housekeeping, and practical sanitation—for directly improving the living conditions of the people; (b) instruction in embroidery, lace making, Irish crochet, and kindred subjects—designed indirectly to improve the standards of living by providing remunerative employment for girls and women at their homes. The first line of work is prescribed for all girls in primary and intermediate courses. It has been left to local representatives of the Bureau of Education to determine what is needed in the way of instruction in the household industries.

A survey of the organization of classes for instruction in the household industries mentioned above discloses that too great a diversity of subjects is undertaken and that, in many schools, there are too many changes from year to year in the kind of work undertaken. There is too much scattering of effort. The principal object sought in giving instruction in these subjects is to assist in establishing local industries. The class-room instruction is but one link in a chain of processes that must be carried out before an industry is established. The pupils who have been trained in the schools must be organized into productive centers by local agents or brokers, a market for the product must be secured, and business relations must be established between the local agent and the exporter. The difficulties to be met and overcome in establishing any one industry in a locality are sufficient to call for the best efforts of those upon whom will fall the work of organizing the local

Concentration of
Effort in Promoting
the Household
Industries.

working centers. Obviously the difficulties are multiplied if the establishment of two or three industries is undertaken simultaneously. Furthermore, it is only by specialization that the high degree of efficiency is reached that is necessary for successful competition with workers in other parts of the world.

As indicated above, the first step to be undertaken is to train as large a number of workers as possible in one line, be it embroidery, lace making, or Irish crochet. Due consideration should be given to the selection of an industry to be promoted, and when once this has been determined every effort should be put forth to carry to completion the establishment of the industry in the homes. It is essential that a large number of workers be trained in a locality in order to make it profitable for a broker to organize them and to give them the supplementary training they will need in order to produce work that will be acceptable to the trade. Manifestly, if one line of work is taught for two or three years and is discontinued for another, or, if two subjects are given in alternate years, it will only delay the establishment of either and will defeat the object sought. To assist in carrying out the plan a record should be kept, in the office of the supervising teacher, of each pupil who has left school after receiving training in an industry, so that data will be available showing the number of trained workers in a locality.

A number of the leading business and professional men are giving talks to the high school students at Shelbyville, Ind., on vocational topics, thereby giving the boys and girls the benefit of the experience of the men who are doing the work and solving the problems of that community.

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NO SPECIAL INDUSTRIAL INSTRUCTION IN JAVA.

The American consul of Batavia, Java, reports that it is the aim of the Government to make public instruction general, although there is no free-school system in that colony. He states that no special industrial instruction is given in the Government schools, but that a system of agricultural education is maintained which is very popular with the natives and largely attended. The latest statistics do not show any figures in respect to the school attendance of the natives, but it is believed that not 1 per cent of the natives are being educated.

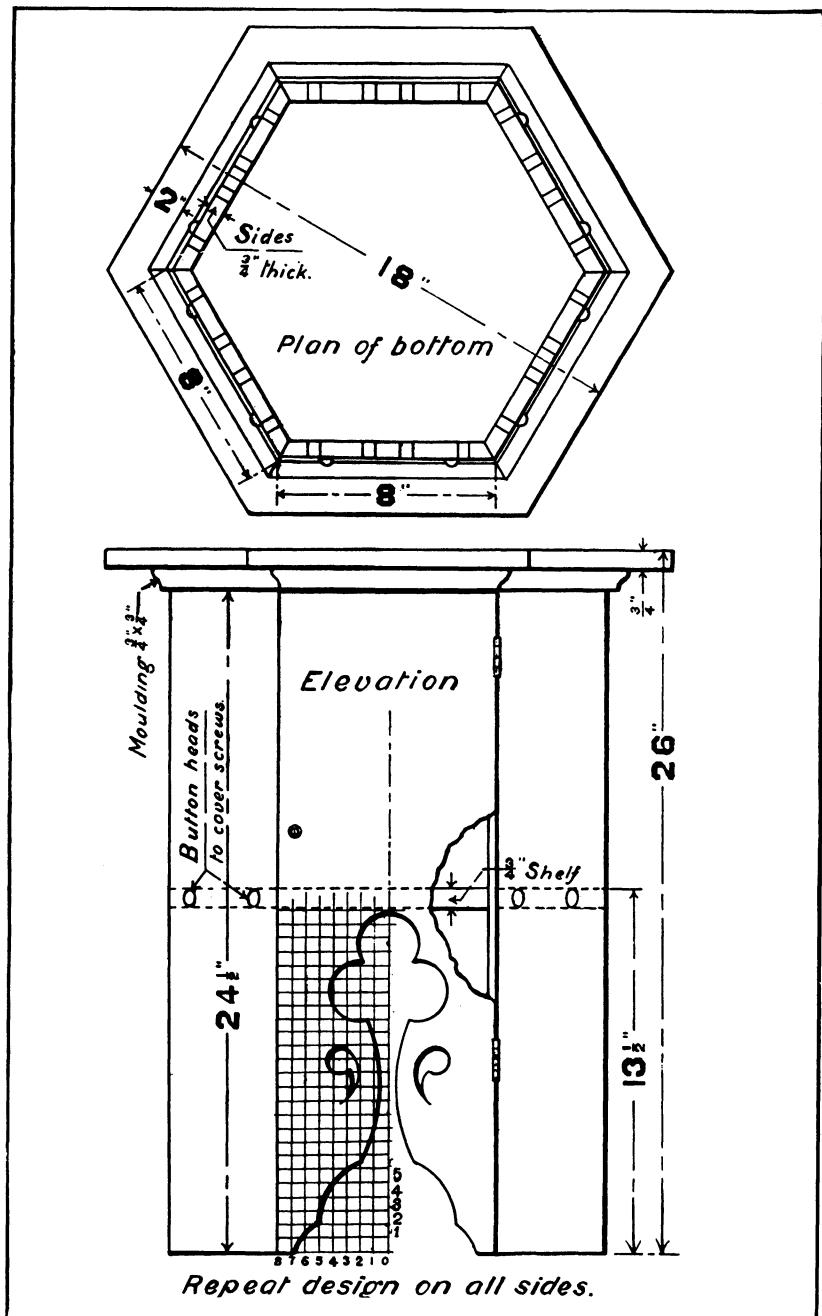
HAMPTON INSTITUTE'S WORK FOR NEGROES.

Hampton Institute's remarkable results in training negroes are vividly set forth in the forty-fifth annual report of the principal, just made public. From a school of 15 pupils and 2 teachers, the institute has grown into a busy educational village of over 1,000 persons, with a far-reaching influence, not only for the race it is designed to aid, but for the whole nation, which benefits by the splendid work and example of Hampton graduates everywhere.

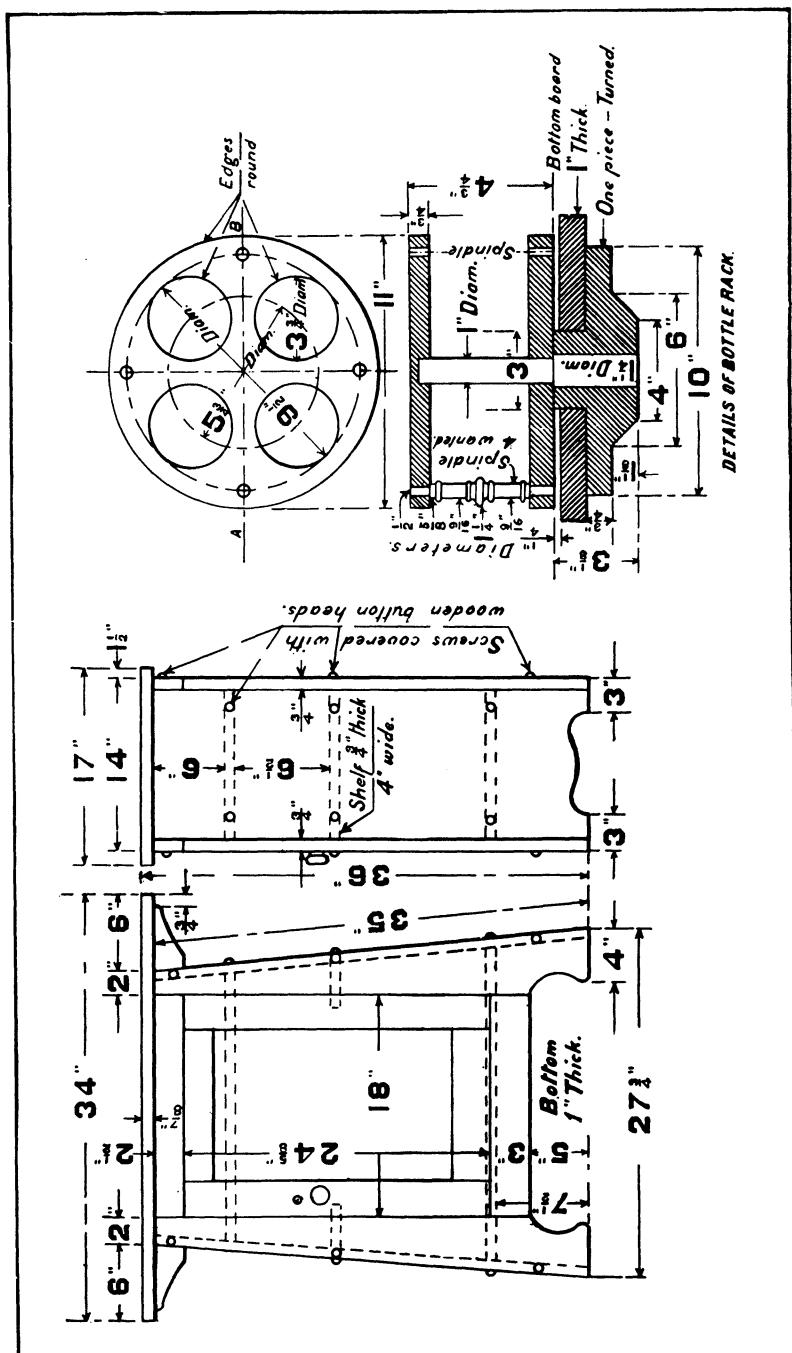
Industrial training is the keynote of the Hampton success, according to Dr. P. P. Claxton, United States Commissioner of Education, who is keenly interested in the Hampton work. It is noteworthy that this industrial training is of the most immediate and practical sort, applied to the ordinary producing tasks of life, first of all in the educational plant itself. At Hampton practically all the work is done by the students themselves. There are buildings to be kept in repair and occasional new buildings to be erected; there is a farm of 600 acres to be cultivated, with 150 cows and young stock, 40 horses and mules, hogs, and poultry. There are horses to be shod, harness to be kept in repair, wagons to be built, boys to be clothed—these are a few of the industrial opportunities which the plant itself offers. Last year the students received over \$86,000 in wages, of which about one-fourth went to the girls for domestic work in the institute.

This year the boys of the trade school have built Clarke Hall at a contract price of \$26,142. The work called for the services of bricklayers, plasterers, carpenters, sheet-metal workers, steam fitters, plumbers, cabinetmakers, electricians, and painters. The architect who designed the building, after inspecting the brick-work done by the boys, said it compared favorably with similar work by New York men; and some of the local builders pronounced it the best piece of work in that section of Virginia.

At Hampton work is considered a privilege; in fact, one form of punishment is the taking away of work from a pupil. No student is ever punished by being forced to work. At the same time, labor is not insisted on as an end itself, but rather as the means to an end. "The aim of Hampton," says Dr. George P. Phenix, vice-principal, "is not merely to train workmen, but to educate men and women who shall stand for the best things in the communities to which they return, and who can make their skill contribute to this end."



Cellaret.



INDUSTRIAL NOTES.

The Province of Leyte has made arrangements to carry in stock sufficient sewing materials to supply the provincial schools and all municipalities. This will undoubtedly aid in the securing of uniformity of materials and the standardization of work. It will tend to diminish the use of poor materials, often purchased locally at a high price, and will save the long delays involved in ordering materials from Manila.

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One of the students who was graduated from the Philippine School of Arts and Trades in 1911, now in the Bureau of Public Works, is in charge of the construction of several standard school buildings. He is receiving ₱1,600 per year and per diems.

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In using pandan weavers the spokes must be very close together, as the pandan is not as stiff as the common palm petiole weaver. Greater body and stiffness may be obtained by using a double weaver. One long weaver, 8 or 10 millimeters in width, is sufficient for a workbasket. The pandan weaver is quickly and easily prepared. It is very durable and age improves its luster.

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KEROSENE IS USEFUL.

Kerosene is of great value as a softener of rust, but in four cases out of five it is not given sufficient time to do this work. Kerosene splashed on and immediately rubbed off will do practically no good; it must be given time to penetrate, the longer the better. Several hours at least ought to be allowed, and if the rust is heavy, all day or night, or both, will

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be found necessary to give the oil an opportunity to do what it is capable of doing. The same principle applies, of course, in cases where kerosene is applied to a nut rusted on a bolt or stud, only in this case the oil has to penetrate between the metal faces in addition to permeating the film of rust.—(Blacksmith and Wheelwright.)

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THE SCHOOL OF HOUSEHOLD INDUSTRIES.

A section of the second class in the School of Household Industries completed the course in embroidery and lace making and graduated from the school August 1, 1913. They returned immediately to their home towns to undertake the organization of working centers for the production of embroidery. Before leaving Manila these pupils spent some time at the Sales Agency, observing the methods employed in transacting business with embroidery producers. They were given orders to be filled for the Sales Agency as soon as they shall have trained a number of workers to produce marketable articles. In order that these graduates may succeed in the business for which they have been trained at Government expense, they will need all of the encouragement and assistance that can be extended to them by representatives of the Bureau of Education and the Sales Agency.

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MORO CORN EXPERIMENT.

During the last corn campaign a quantity of Moro corn was secured and distributed to every school division in the Philippines. This corn

was planted under widely varying climatic conditions. In some instances the season was favorable and in others the corn was planted in the most unfavorable season of the year. A detailed report was submitted for every demonstration, and it is of special interest in connection with the corn campaign to know that the reports as a whole were favorable. A corn plot at the Laguna Provincial School contained 37 stalks of this corn. All stalks except two produced two ears to the stalk.

One-tenth of a hectare was planted at the Batac Farm School and Mr. Davis, the principal, reports that 90 per cent germination was secured, and that the corn matured in eighty-eight days with 60 per cent of the stalks producing two ears each.

The division superintendent of schools for Bohol reports that 50 per cent of the corn planted produced two ears to the stalk and that the ears were well grained and in several other respects were far superior to the local corn grown.

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ASSIGNMENT OF DIVISION INDUSTRIAL SUPERVISORS, SCHOOL YEAR 1913-14.

Under the present organization of the Bureau of Education the division industrial supervisor performs an important rôle in developing and standardizing industrial instruction and in making effective the industrial program now being pursued in the public schools of the Philippines. As the representative of the division superintendent, he is in constant and close touch with all teachers, and through them formulates plans for, and gives direction to, the different phases of industrial work in primary and intermediate grades.

The nature and importance of his duties are such that it has seemed appropriate to publish here the list of school divisions in which such as-

signments have been made, with the names of teachers who have been so designated.

- Agusan—Mr. Jose C. Ortega.
- Albay—Mr. Ralph E. Spencer and Mrs. Pearl F. Spencer.
- Antique—Mr. Roberto C. Pacificador.
- Batangas—Mr. Ward B. Gregg.
- Bohol—Mr. Gilbert S. Perez.
- Bulacan—Mr. G. Glenn Lyman.
- Cagayan—Isabela—Mr. Martin S. Jones.
- Camarines—Mr. John C. Cudoba.
- Capiz—Mr. E. Ford Hickman (on leave).
- Cavite—Mr. Guss Donnell.
- Cebu—Mr. A. B. Cober.
- Ilocos Norte—Mr. Gil Raval and Miss Carmen Martinez.
- Iloilo—Mr. Joseph H. Loughran.
- Laguna—Mr. Mateo Alfonso.
- Leyte—Mr. Henry E. Guyer.
- Nueva Ecija—Mr. Walter J. Robb.
- Occidental Negros—Mr. Benjamin J. Levin.
- Oriental Negros and Misamis—Mr. C. A. Belknap.
- Palawan—Mr. Manuel Bacosa.
- Pampanga—Mr. W. Huse Chapman.
- Pangasinan—Mr. H. B. Atkins.
- Samar—Mr. H. D. Fisher.
- Sorsogon—Mr. Ernest H. Hespelt.
- Tarlac—Mr. David C. Loveland.
- Tayabas—Miss Jennie M. Jackson and Mr. V. R. Concepcion.
- Union—Mr. Benjamin F. Bennington.
- Zambales—Mr. Albert F. Cassidy.

THE 1913 CORN CAMPAIGN.

The Corn Campaign of 1913 is being heartily supported by the Executive Bureau in the same manner as was the campaign of last year. In a provincial circular sent to all provincial boards and provincial treasurers, liberal appropriations in aid of the campaign were requested and the active assistance of all provincial and municipal officers in making the campaign a success was asked. The circular stated that the Corn Campaign of 1912, so efficiently prosecuted by the Bureau of Education and effectively supported by provincial and municipal governments and the public, was productive of excellent results in disseminating a wider knowledge among the Filipino people as to the best methods of cultivating this cereal, its value as a food product, and the many ways of its palatable preparation as such.

The following distribution of expenses was made. The Bureau of Education is to bear—

(a) Expense incidental to the preparation and distribution of printed matter from the General Office.

(b) Expense necessary in the preparation and distribution of certificates.

(c) Office expense in conducting the 1913 corn campaign.

(d) Actual and necessary authorized travel expense (including subsistence) of Insular teachers engaged in special work in connection with the proper conduct of the campaign.

(e) Expense incidental to the placing of the final corn exhibit in Manila.

The expenses which will have to be met locally from provincial or municipal general funds, or from voluntary contributions, are as follows:

(a) Expense incidental to the conduct of popular corn demonstrations.

(b) Expense incidental to the

giving of corn lessons in cooking classes.

(c) Expense incidental to the giving of special corn lunches.

(d) Expense incidental to the conduct of food demonstration booths in public markets.

(e) Expense incidental to the securing of material prizes for provincial winners in the corn-growing contests.

All expense incidental to amusement features, decorating floats, serving special meals to visitors, giving dances, or conducting athletic programs is to be made from funds privately contributed and not from public funds. The employment of a band of music, if at a function open to all persons without restriction, could properly be paid for from public funds.

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PHILIPPINE MAHOGANY.

As yet very little Philippine mahogany finds its way into the United States, but since it is probable that large quantities may be used in the near future, especially in the West, it may be interesting to discuss these woods. No true mahogany grows on these islands; but the best grade of some of the most plentiful and cheapest woods are sold as substitutes for mahogany. The California report of 1912 shows that 33,792 feet of Philippine mahogany (narra) was used in the State at an average cost of \$151.51 per thousand. Of this amount, furniture manufacturers used 6,000 feet at \$130 per thousand, which was \$85 less than the average cost per thousand of other mahoganies. In this connection it is interesting to note that in Michigan, the leading furniture State, nearly five and a half million feet of mahogany (American and African) were used for furniture at an average cost of \$133 per thousand.

Narra, the best and most expensive Philippine mahogany, is yellow, red, or nearly white; moderately heavy and hard, easy to work, coarse and sometimes twisted grain with fine parallel cross lines ("ripple marks"); retails in small quantities at \$100 to \$150 in the Philippines, and is then laid down in the United States for much less than that sum.

Calantas is another common wood sold under the name of Philippine mahogany. It is inferior to narra and closely resembles West Indian Spanish cedar. It retails at \$70 to \$90.

Palo maria, sold as Borneo mahogany, is reddish brown, hard, moderately heavy, fine, curly grained; hard to work; often comes in short, crooked logs; retails at \$65 to \$85; not as plentiful as either narra or calantas.

Red lauan is red to reddish brown; light, rather soft; straight, coarse grain; retails at \$30 to \$42.50; sold in the United States as a substitute for plain mahogany.—(The Furniture Manufacturer and Artisan.)

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THE BUKAL CAMP.

It was while making week-end hikes with pupils to get industrial materials that the Laguna basketry teachers first obtained a taste of camp life and grew to like the invigorating air of the mountains which they had to climb.

When the close of the school year approached, the question arose as to where they would spend the long vacation. Baguio was beyond the reach of their pocketbooks and they dreaded the crowding and heat of Manila. Both these places offered so many attractions that even the most assiduous basket maker could not be expected to stick to his task.

Far up in the hills, near the divide between the Pacific Ocean and the China Sea, with an excellent climate and water supply and

an abundance of basketry materials, the barrio of Bukal had been the rendezvous of many a students' hiking party during the year. The good people of Bukal had carried building materials several miles over a trail and built a schoolhouse. They enjoyed the visits of the teachers and pupils and proudly offered the use of the new schoolhouse to all hiking parties. Bukal was selected as the ideal location for a basket-makers' camp.

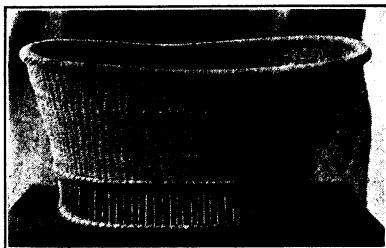
Fifteen teachers were selected and requested to make preparations to attend the camp. The aim was to produce useful types of baskets which could be made in the schools during the coming year. Each teacher was assigned a task and given a general idea of the article



Waste-paper baskets, Bukal Camp.

he should make. The details were left to be worked out by the teacher. No emphasis was placed on the quantity of articles completed, as the work was largely experimental and some of the articles had to be made over several times before the instructor was satisfied with the design and general appearance.

The camp was in charge of the industrial supervisor for the province and one of the teachers was selected to take charge of the mess. Two teachers were detailed daily to do the cooking, cleaning, and general policing of the camp. With thirteen hungry and exacting teachers to spur them on, there was but little shirking of duty on this part of the detail. All members of the camp gained in weight, the minimum gain being 1 kilo and the maximum 3 kilos.

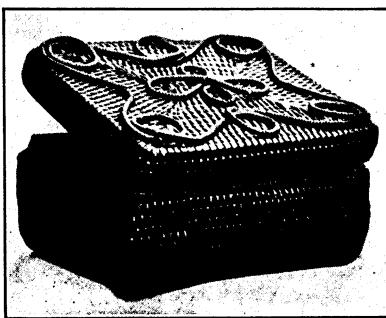


Baby basket, Bukal Camp.

The camp had its athletic program, and games of baseball and volleyball were played with the pupils of the barrio of Bukal and the town of Cavinti.

The last day was given up entirely to athletics, the roasting of a pig, and the preparing and eating of a sumptuous feast. In the evening a farewell reception was given the visitors by the people of the barrio. The next morning, by 6 o'clock, a file of teachers could be seen winding their way homeward over the narrow Bukal trail. All enjoyed camp life and are anxious to repeat the experience.

During the 1914 long vacation it is planned to organize a camp of several good basket makers from the public schools to test the economic value of basketry as an industry. A careful account will be made of the labor and materials used and the market value of the product.—
R. G. McLeod.

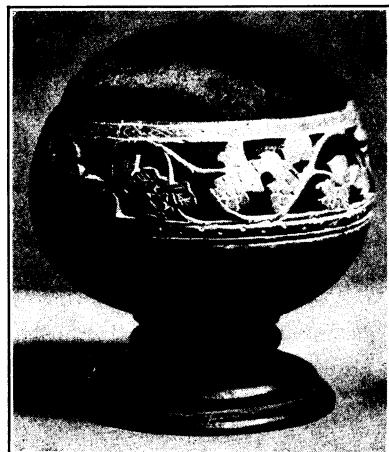


Kilog Jewelry box, Bukal Camp.

COCONUT POLISHING.

The mature, brown-shell coconut is the best for polishing. Coconuts with white shells may also be used, but will not take so high a polish as the brown. In polishing coconuts the following steps and processes will be found easy to follow and productive of good results.

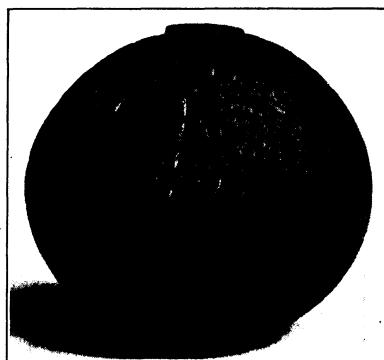
Remove the fibrous husk of the nut. Then use a saw to cut off the upper part containing the "eyes." After removing the meat and the water, use a file to make the shell thin and smooth. After filing, use any kind of coarse sandpaper; but



A pincushion.

as the shell becomes thinner, finer grades of sandpaper should be used to take off the scratches made by the coarser paper. This work should continue until the surface presents a smooth and even surface.

The shell is now ready for polishing and converting into the finished product. The smooth shell should be dampened with alcohol, sprinkled with powdered pumice stone, and rubbed with a rotary motion until it becomes dry. This operation must be repeated until the pores are filled and all the sandpaper scratches disappear. Then put 100 grams of

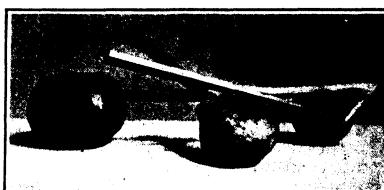


A bank.

shellac into 1 liter of denatured alcohol. Shake the bottle until the shellac becomes thoroughly dissolved. With several drops of this mixture moisten a soft ball of cotton waste or cloth wrapped in a piece of soft smooth cotton cloth. Do not use too much of the alcohol-shellac mixture, but do not spare the "elbow grease." With this cloth ball, moistened as above stated, rub the surface of the shell firmly. If this does not produce a good polish, unfold the outer cloth of the ball and put inside three or four drops more of the alcohol-shellac mixture. Rub the shell until it looks shiny. Handle it with a piece of thin cloth. When the shell has been properly polished with the alcohol-shellac mixture, put a drop or two of olive oil into the same cloth ball and rub the surface of the shell thoroughly.

This industry may be taught in any grade. Working one hour daily, a young schoolboy requires several days to finish one article.

Polished coconut shells have a



Dippers.

great variety of uses, such as spoons, cups, teapots, savings banks, vases, powder boxes, hair receivers, and trophy cups.

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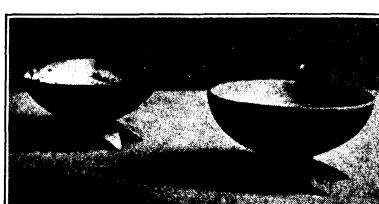
VOCATIONAL EDUCATION IN MANILA CITY SCHOOLS.

The following extracts are taken from some of the annual reports submitted by supervising teachers and principals to the superintendent of city schools covering the industrial activities of the year 1912-13:

Slipper making of former years was greatly improved upon, both in models and styles. * * * Work done in filling a small embroidery order from the United States received the highest praise. * * * Two new shops were built, additional equipment bought for them, and another completely furnished with tools. * * * Three school gardens were fairly successful, each producing two crops. * * * Two schools were awarded prizes by the Luzon Floral Company for exhibits of vegetables at the close of the carnival. * * * Home gardening has been taken up by many pupils, a thing which demonstrates the practical value of the school garden.—(Mrs. Leora Day, supervising teacher.)

One of the school girls made 18 good, crochet hand bags from February 1 to March 31, and sold nearly all of them immediately. * * * Malate school garden obtained 7 of the 16 premiums offered for school gardens in Manila. Many boys have home gardens as a direct result of the instruction in school gardens.—(Miss Estella M. Murdoch, supervising teacher.)

Of all our industrial work, our gardening is by far the most practical, successful, and satisfactory. The average city boy must have his



Trays.

attention turned to the fact that nature rewards those who cultivate the soil; and there is ever the hope that the school garden, insignificant though it be, may furnish the inspiration to turn a few of our city boys toward agriculture—a consummation devoutly to be wished. * * * As the Philippines advance in prosperity, wood will displace many of the fibers at present used in the manufacture of furniture and utensils. It seems to me that it would be decidedly to our advantage to put more stress on woodworking in the intermediate course. * * * Next year all our girls will be taking the special course in housekeeping. I believe this course should stand as it is; the girl who spends three years in it ought to leave the intermediate school with some definite idea of what to do when she sets up a home of her own.—(Harry W. Brown, principal, Sampaloc Intermediate.)

In the sewing department (School for the Deaf and the Blind) the whole year was devoted to making and mending clothes. Since June, 1912, 75 pairs of trousers, 50 camisas, and 42 dresses were cut and made by girls whose average age is 11 years. * * * The deaf boys of the class in carpentry have had a profitable year under the care of a student teacher detailed from the Philippine School of Arts and Trades. * * * The blind boys of the school all come from towns where basketry is being commercialized, and judging from the degree of proficiency they have attained in this line, it is believed they could engage in that industry at home without further attention upon the part of a teacher.—(Mrs. Delight Rice Webber, principal, School for the Deaf and the Blind.)

The girls do their own washing and ironing, prepare their food, and serve it at the table. Also first and second grade girls do plain sewing, cross-stitching, crochet work, and lace making; while the third and fourth grades do embroidery and fancy sewing.—(Miss Dolores Perez Rubio, teacher in charge, orphan girls, Hospicio de San Jose.)

The industrial work includes cooking, washing, ironing, housecleaning, plain sewing, garment making, darning, mending, embroidery, and lace making. Also one of the girls' daily duties is to assist in caring for the aged, infirm women of the insti-

tution.—(Mrs. Mary DuH. Clagett, teacher in charge, reform girls, Hospicio de San Jose.)

In general, the work accomplished by the city school shops during the past year has been satisfactory. * * * Things in this line are on the upward move, and next year ought to see every shop on a good working basis.—(Frank Cheney, supervisor of woodworking.)

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Practical instruction for plumbers' apprentices has been provided in the Lane Technical High School of Chicago, Ill., by the vocational department of the public schools.

Arrangements have been made between the plumbers' union and the master plumbers' association whereby boys may attend school one-half day each week, receiving full wages for the time spent in study.

The work will consist of instruction in sanitation, plumbing, designing and installation, mathematics, applied English, and history.

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In Cleveland, Ohio, a special bureau distributes seeds for the raising of vegetables of every adaptable variety. This bureau plans to have every vacant lot in the city under cultivation. Prizes are awarded at a fall exhibition.

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PAYING APPRENTICES WHILE AT SCHOOL.

One of the largest machine factories in Switzerland (Maschinen Fabrik Oelikon) pays its apprentices for hours they pass at the industrial school, according to their merit. If their average mark is 6, they receive 15 per cent more pay than usual.

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|--------------|-------------------|
| 5.9..... | 14 per cent. |
| 5.8..... | 13 per cent. |
| 5.7..... | 12 per cent. |
| 5.6..... | 11 per cent. |
| 5.5..... | 10 per cent. |
| 4.5-5.5..... | Their usual pay. |
| 4.0-4.5..... | 10 per cent less. |
| 1.0-4.0..... | Nothing at all. |

Six is the best mark, and 1 the lowest. The apprentices are given time to attend school ten hours a week.

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It is significant that the six States that have already set up systems of vocational education—Massachusetts, New York, Connecticut, New Jersey, Wisconsin, and Indiana—have long had excellent schools. The newer education which they are introducing is not intended to replace the old, but to supplement it—to give training for a specific employment in addition to the regular schooling, so that the boys and girls may be more efficient and willing workers, as well as better educated individuals.

Mississippi has built 27 county agricultural high schools in the past two years at an average cost of \$30,000 per school. These schools furnish board and dormitory facilities for \$5.50 per month, and the boys and girls are paid a certain amount per hour for the work they do, so that in most cases the expense to the pupil is reduced to about \$3 per month.

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More than a million people took advantage of the "educational trains" sent through the rural districts last year by the State agricultural colleges of 31 States, according to figures compiled by F. B. Jenks, of the United States Bureau of Education. In this way the colleges have brought knowledge of improved methods of farming home to many who would probably never have been reached in any other way. The educational train usually consists of 3 to 10 coaches, well supplied with exhibits and demonstration apparatus, and in charge of practical men who can talk interestingly on the farmer's real

problems. The stops made by these trains range from two hours to half a day. Four State colleges—those in Texas, California, Louisiana, and Oklahoma—report attendance at the stops of these educational trains of a hundred thousand or more during the season. The Oklahoma institution takes the opportunity to attach to the train a car containing moving-picture views of college activities, thus cleverly attracting the attention of the farm boy to the possibilities of an education at the State college.

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The new compulsory continuation school for girls at Berlin will offer six hours of instruction weekly, one-fourth of which must be given in courses dealing with "education for the home".

The city of Breslau, Germany, has a new "school museum," where the best things in educational progress are shown for the benefit of the public. On the first floor are exhibits of school architecture, school furnishings, hygiene and statistics, mathematics, physics and chemistry, and a testing room for scientific apparatus used in the school. On the second floor are busts of well-known educators of the past—Comenius, Pestalozzi, Diesterweg, and Froebel; exhibits showing the teaching of religion, history, language, geography, astronomy, natural history and industrial economics, and the library. Above are the exhibits of manual training and domestic science; of auxiliary schools, kindergarten, and instruction of the blind; of drawing, singing, and physical training; and a large hall containing examples of school work from Germany and other lands. The Breslau school museum is one of fifteen permanent educational expositions established in the German Empire since 1904.

Valparaiso, Ind., has introduced cooking in the schools, and great interest is shown. A class for boys has been organized.

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TEACHING FRUIT GROWERS IN GERMANY.

Instruction by itinerant teachers is a feature of German agricultural education, especially in fruit growing, according to information received at the United States Bureau of Education through consular advices. The work is similar to the agricultural extension work carried on in some sections of the United States, but shows several interesting local differences.

The school for wine and fruit growing at Kreuznach sends its instructors over the entire district of 200 villages. The plan is found to be excellent not only for the farmers, who receive the direct benefit, but for the teachers themselves, who are enabled to keep in close touch with the practical side of their work. This instruction is furnished entirely without charge.

The horticultural school at Oppenheim, besides giving instruction by lectures and furnishing practical aid to the farmers, has introduced "model vineyards." The school and the vineyard proprietors enter into a five-year contract, by the terms of which the school exercises supervision over the vineyard and the vineyard owner agrees to follow the directions of the school in every particular. The school makes no charge for this service. There are about a dozen such "model vineyards" in the Grand Duchy of Hesse.

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MAKING FARMERS OF CITY WAIFS.

Transplanting homeless boys of 12 to 16 years of age from the crowded districts of the metropolis to the

farms of rural New York is the task attempted by the Lincoln Agricultural School, of Lincolndale, N. Y., according to information received at the United States Bureau of Education.

This school, which is a charitable institution, takes boys fresh from the city streets, gives them practical training in agriculture, teaches them proper living conditions, and then finds places for them with families of farmers, thus helping the boys to better citizenship and giving the State more and better farmers.

Lincoln School is made as different as possible from the traditional "institution." Groups of attractive cottages replace the old-time single, huge structure of the cities; instead of the big, common dining hall usual in charitable institutions, a number of small dining rooms are provided; and each group of boys has a separate sleeping apartment. Every effort is made to produce a real home environment, where the child may develop under conditions as nearly as possible like those of a normal home. The school has a farm of 600 acres, with model dairy buildings and a herd of about 150 cattle. The boys are taught to produce absolutely clean milk and to grow fruit and vegetables by the most modern methods.

Home and social training is emphasized in the Lincoln School. Not only are the boys trained to be good farmers, but they are fitted for entrance to the better class of rural homes. "We feel that our training makes a boy a very acceptable member of society," declares Brother Barnabas, superintendent of the school. "Our aim is to teach the boy to know and respect himself; to give him the means whereby he may be enabled to earn an honest livelihood; to teach him habits of thrift

and economy, so that some day from the savings of his industry he may become a home owner and live a simple life under conditions which give him correct ideas of his civic and social obligations."

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COMMENT ON THE PHILIPPINE CRAFTSMAN FROM THE UNITED STATES, INDIA, AND CHINA.

The attention which **THE PHILIPPINE CRAFTSMAN** is having in the United States is well evidenced by a recent request received from "The Brick and Clay Record," one of the most important magazines in the United States devoted to brick and clay industries. Permission was asked to reproduce some of the article on "Philippine Clay Work" written by Mr. Clifford H. Crowe, instructor in the Philippine School of Arts and Trades, and published in the January number of last year's **CRAFTSMAN**.

From Shanghai, China, Juan Menearini, who will be well remembered by those of the Bureau who attended the Baguio Assembly in 1912 for his lectures on China, is quoted in respect to **THE PHILIPPINE CRAFTSMAN** as follows: "Excellent as the general get-up is, the general text matter is far superior to what is generally given in such publications."

Julian H. Arnold, the American consul at Chefoo, China, writes that he loans copies of **THE PHILIPPINE CRAFTSMAN** to the missionary educationalists in his district to good advantage and that in this manner much good work has been accomplished. He states that in several instances the use of **THE PHILIPPINE CRAFTSMAN** has led to the inauguration of industrial work, somewhat modified from the splendid system obtaining in the Islands, but adapted to the conditions and financial resources of the mission stations.

Apparently the American administrators of the Philippine Islands are leaving no stone unturned to make the people strong mentally and materially, so that, at no distant date, the Filipino people may become capable of governing their country. We have received No. 9, Volume 1, of **THE PHILIPPINE CRAFTSMAN**, which is published by the Educational Department for the advancement of industrial instruction in the public schools of the Islands. The wealth of illustrations in the number is most remarkable. The articles on "Operating a Trade School as a Commercial Shop" and "Felling, Sawing, and Seasoning Timber" are worthy of being studied by the principals of industrial institutions in this country. —(United India and Native States.)

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BASKETRY TERMS AND DEFINITIONS.

[Continued from August number.]

Overlaying.—Laying a split straw or other colored material on a tough weft splint or sewing material, in basket making, to take the place of colored bark. If the two are not twisted on each other, the figure does not show inside the basket.

Padding.—Soft material in the foundation of coiled basketry, helping to make the structure watertight. (See Chinking.)

Pentacle.—In basket ornament, a 5-pointed star whose lines inclose a pentagon.

Pierced warp.—The form of weaving in cat-tail and other soft materials when the weft strings pass through the warp. The warp stems are strung on the weft strings.

Radial warp.—The arrangement of warp elements or spokes in the bottom of a cylindrical basket. They may be (1) crossed, (2) cut away, or (3) inserted. Radial patterns or

designs are such as proceed from the central portion of a bowl-shaped basket outward to the border.

Scroll work.—Imitation of art scroll on basketry. It is usually angular.

Sewing.—The joining of parts with an awl and splint. Coiled basketry is sewed, not woven.

Shoots.—The young and pliable growth of plants in the first year. Rough shoots, prepared shoots, and split shoots are used.

Shreds.—Irregular strips of plants used in foundations of coiled baskets.

Spiral.—Term applied in basket making and decoration: (1) To the whorled coil, wound about a center and receding, as in Hopi plaques, flat spiral; (2) to the helical coil, winding on a cylinder, cylindrical spiral, as in coiled jars; (3) to the conical coil, rising in a cone, conical spiral.

Splint.—In basketry, a long strip of split wood, uniform in width and thickness, for weaving or sewing materials. Often the term is more loosely applied to the split pieces that make up the foundation of coiled work.

Spoke.—Term sometimes applied to each of the elements in radiating basket warp.

Stalk.—The stems of reeds, grass, cat-tails, etc., for basket materials.

Stitches.—The separate elements in sewing coiled basketry. They may be close or open, whole or split (furcate), and interlocked.

Strand.—One of the elements of the weft in twined basketry, which may be two-strand, three-strand, etc.

Strip.—A narrow ribbon of leaf or other thin basket material answering in function to the harder splits.

String.—Two or more small yarns twisted together. The warp of twined wallets is of strings.

Symbol.—The meaning of a design on a basket. Care must be exercised in the use of this word. Only the maker of the design knows the symbol or meaning.

Tessellate.—Inlaid, as in checkered mosaic. The checks and stitches as well as the designs in baskets have a tessellate appearance.

Twine.—To bend something around another object. In basketry, to make twined ware in any of its varieties, plain, twilled, wrapped, latticed, three strand, etc.

Warp.—The elements of woven basketry on which the fabric is built up; may be parallel, decussated, latticed, radiated, zigzag, etc.; also a single one of these. Each element may be called a warp. (See Spoke.)

Wattling.—Coarse fence or fish weir in wicker or twined basketry.

Weft.—The filling of woven basketry, same as woof.

Weftage.—The texture of woven basketry.

Whip or whipstitch.—To sew with an overcast stitch, with long wrapping stitches. The sewing of coiled basketry may be so called. Borders of baskets are often whipped on.

Wickerwork.—Weaving in which the warp is rigid and the weft flexible.

Wind.—To wrap one element about another. Same as frap. In Thompson River wallets the twined weft is wound or frapped with corn husk.

Wrapped weft.—Basketwork in which the plain or twined weft is wrapped with soft decorative material.

Woof.—See Weft.

Yarn.—Fibers twisted together, as in receptacles made from native hemp.

Zigzag.—A broken line of equal angular portions applied to structure or decoration in basketry.

BUREAU OF EDUCATION PUBLICATIONS.

(Abbreviated list.)

ANNUAL REPORTS:

- First to Tenth Annual Reports of the Director of Education. (Supply exhausted.)
- Eleventh Annual Report of the Director of Education.
- Twelfth Annual Report of the Director of Education.
- Thirteenth Annual Report of the Director of Education.

BULLETINS:

- 1 to 30. Various subjects relating to the early activities of the Bureau. Edition for the most part exhausted and material obsolete.
- 31. School and Home Gardening. 1910. (Now being revised.)
- 32. Courses in Mechanical and Free-hand Drawing. 1910.
- 33. Philippine Hats. 1910. (Edition exhausted.)
- 34. Lace Making and Embroidery. 1911.
- 35. Housekeeping and Household Arts—A Manual for work with the Girls in the Elementary Schools of the Philippine Islands. 1911. (Edition exhausted.)
- 36. Philippine Normal School—Catalogue and Announcement. 1911. (Edition exhausted.)
- 37. School Buildings and Grounds. 1912.
- 38. School Buildings—Plans, Specifications, and Bills of Material. 1912.
- 39. A Manual of Free-hand Drawing for Philippine Primary Schools. (In course of preparation.)
- 40. Athletic Handbook for the Philippine Public Schools. 1911. Revised, 1913.
- 41. Service Manual of the Bureau of Education. 1911. (Edition exhausted.)
- 42. Intermediate English, II—Notes, Directions, and General Aids to the Preparation of the Correspondence Study Course. 1911.
- 43. Philippine School of Arts and Trades—Catalogue. 1912.
- 44. Libraries for Philippine Public Schools. 1912.
- 45. The School of Household Industries. 1912.
- 46. The Industrial Museum, Library, and Exhibits of the Bureau of Education. 1913.
- 47. Good Manners and Right Conduct. 1913.
- 48. A Course in Civics. (In course of preparation.)
- 49. Philippine Industrial Fibers. (In course of preparation.)

BULLETINS—Continued.

- 50. Arbor Day and School Holidays. (In course of preparation.)
- 51. Philippine School of Commerce. 1913.
- 52. Philippine School of Arts and Trades—Nautical Department. 1913.

THE TEACHERS' ASSEMBLY HERALD:

- Volumes I-V. 1908-1912. (Supply exhausted.)
- Volume VI. 1913. (Supply limited.)

THE PHILIPPINE CRAFTSMAN:

- Volume I. 1912-13. (Supply limited.)
- Volume II. (Now current.)

TEXTBOOKS:

- Woodworking—A Manual of Elementary Carpentry for Philippine Public Schools. 1908.
- Selected Short Poems by Representative American Authors. 1911. Reprint, 1913.
- Commercial Geography; the Materials of Commerce for the Philippines. 1911.
- Samuel Johnson, Macaulay; Self-Reliance, Emerson; Gettysburg Address, Lincoln. 1911. Reprint, 1913.
- Supplementary Problems for Trade Schools and Trades Classes in the Philippine Public Schools. 1913.
- Housekeeping—A Textbook for Girls in the Public Schools of the Philippine Islands. (In course of preparation.)
- Economic Conditions in the Philippines. (In course of preparation.)

MISCELLANEOUS:

- Domestic Science, A Guide to Practical Instruction in Housekeeping, Sewing, Cooking, and Laundering in Grades Three and Four of the Philippine Public Schools. 1908.

Some Recipes for Preparing Jellies, Preserves, Pickles, and Candies from Philippine Fruits. 1911. (Supply exhausted.)

Second and Third Annual Reports on Private Schools and Colleges of the Philippine Islands. 1911 and 1912. (Supply exhausted.)

A Statement of Organization, Aims and Conditions of Service in the Bureau of Education. 1911. (Several editions printed at Manila and Washington.) (Supply limited.)

A Talk on Health Conditions in the Philippines. Dr. Victor G. Heiser, Director of Health. 1912.

PHILIPPINE CRAFTSMAN RE-PRINTS:

- 1. Philippine Mats. 1912.

